

SUPPLEMENT

MISSION COMMENTARY TRANSCRIPT - 8/24/65

Tape 180, Page 1

This is Gemini Control at 67 hours 32 minutes after lift-off. Gemini V is now over the Indian Ocean, one-third of the way through the 43rd revolution. Carnarvon, Australia tracking station, due to acquire Gemini V 8 minutes from now, will pass up the the crew flight plan updates for the stateside passes in the next several revolutions. Pilot Conrad presumably is still asleep at this time. The balky spacecraft reticle has now been repaired and is functioning again. Command pilot Cooper did some first echelon inflight maintenance on the device by replacing the cord powering the reticle's light source. This is Gemini Control.

END OF TAPE

This is Gemini Control, 68 hours and 2 minutes after lift-off. Gemini V is now over the south-central Pacific toward the end of the 43rd revolution. During the pass over Carnarvon, ending 12 minutes ago, the Carnarvon spacecraft communicator Charles (Chuck) Lewis passed up to the crew several plan landing updates and experiment updates. Carnarvon reported to Houston Flight that the telemetry showed Gemini V was go on the ground. We now have a tape of the Carnarvon pass. Let's hear that tape now.

Carnarvon Cap Com Gemini V, Carnarvon Cap Com.

Conrad Come in Carnarvon, Gemini V.

Carnarvon Cap Com Rog, Gemini V, we've got a lot of updating to do this pass. We'll start by updating your POA's. Are you ready to copy?

Conrad garbled

Carnarvon Cap Com Prior to that we will finish up this platform test procedure and go on to flight plan update.

Conrad OK. Ready to copy.

Carnarvon Cap Com Roger. Area 45-1, 11 + 45 + 36 14 + 07 19 + 17 Area 46-1, 13 20 9 12 + 59 18 + 32. 47-1, 14 55 36 12 + 09 18 + 07. Area 48-1,

Houston Flight Carnarvon systems, this is Houston Flight. Can you give me a readout?

Conrad + 48

Houston Flight Can you get me those two temperature readouts?

Carnarvon Cap Com (command pilot talking on air-ground loop -
transmission not received.)

Houston Flight You'll have to cut the air-to-ground off.

Carnarvon Cap Com 49-4

Houston Flight I can't read you. You'll have to cut the
air to ground off.

Carnarvon Cap Com Roger, Frank. Bravo bravo 05 reading 70 percent -
70 degrees.

Houston Flight Roger. Now the other one.

Carnarvon Cap Com Bravo Charlie 03 reading 65 degrees.

Houston Flight OK. Put back air to ground on.

Carnarvon Cap Com Roger. How far did you get with that update over
the states on the platform test?

Conrad We just got the platform test and the line of
configuration and the platform computer
configuration and the attitude control config-
uration. -

Carnarvon Cap Com OK, I'll go back and start platform test . . .
you got part of it. The configuration is
platform to attitude control
horizon scan . . . star mode 01 30
and procedures as follows: Yaw 90 left. Take

one photo of horizon. Copy?

Conrad Roger, yaw 90 left, take one photo of horizon.

Carnarvon Cap Com Roger. OK, platform test no. 2 configuration.
Same as platform test 1. Procedure as follows:
Point at Southern Cross and take one photo.
Should be on horizon. Next point at
and take one photo. Should be . . .

Conrad Point where?

Carnarvon Cap Com Z zero, ZULU, zulu.

Cooper I copy.

Carnarvon Cap Com Right. That's it on the platform test 2.

Conrad What's the time for platform test 1 and 2?

Carnarvon Cap Com Say again.

Conrad What is the time for test 1 and 2.

Carnarvon Cap Com OK, that is the next on the flight plan update,
Pete. I'll start that now. OK. this
is platform, 12 hours 40 minutes 00 seconds.
.

OK, next is D-4, D-7 - 12 50 00

No. 408. The next one is the platform 13 hours
10 minutes 00 seconds. Remarks, aline SEF.

Next is S8D13. Time 13 32 46. Sequence number 03

Remarks, pitch down 30, yaw left ____ degrees.

Next - are you copying OK?

Conrad

Yeah.

Carnarvon Cap Com

OK, next, medical data pass. 13 47 01. Remarks
command pilot at Canary Island instead of
Carnarvon. Next is platform 14 hours 00 00.
Aline SEP. Next is S1, time 14 hours 18 16.
Remarks, sunset time. Next is D6. 15 hours
08 56. That's sequence no. 021. . . . no. 08
Remarks, pitch down 30, yaw left 2 degrees
. . . . 60. We've got about 30 seconds left and
I've got about half way through this, and I'll
fix you up later. I'll give you the next one.
D6 is 15 hours, 13 minutes, 51 seconds. Sequence
no. 134. . . . no. 08, pitch down 30, yaw 0
. . . . 125. Do you copy?

Conrad

I copy you.

Carnarvon Cap Com

OK, that's about it any minute now.
You will pick up the rest of these next station.

END OF TAPE

This is Gemini Control, 68 hours, 32 minutes after lift-off. Gemini 5 is now over the western Atlantic, northeast of Cuba, at the beginning of the 44th revolution. During the present pass over the Eastern Test Range Station, spacecraft communicator Dave Scott, here in the Mission Control Center, completed relaying to the crew the information on experiments. The Carnarvan station was unable to complete the updates before loss of signal in the previous revolution. Canary Islands station will acquire the spacecraft 3 minutes from now. This is Gemini Control

END OF TAPE

This is Gemini Control, 69 hours and 2 minutes after lift-off. Gemini 5 is now crossing the east coast of Africa and going out over the Indian Ocean. During the pass over the Canary Island station, completed 14 minutes ago, the Canary spacecraft communicator, Keith Kundel, reported to Flight Director John Hodge that Gemini 5's telemetry readouts looked good from the ground. The next station to acquire Gemini 5 will be the Carnarvan station some 12 minutes from now. We now have a tape of the pass over the Eastern Test Range station earlier in this 44th revolution. Let's listen to that tape now.

Cap Com Gemini 5, Gemini 5, Houston Cap Com, over.

Conrad Hello, Houston Cap Com, Gemini 5 here. Go ahead.

Cap Com Roger. I have a continuation for your experiments update.
Are you Ready to copy?

Conrad We copy.

Cap Com Rog. The first one will be D-4, D-7. 15 59 00, sequence 409, and 410 Bravo. Next one is a platform at 16 15 00, aline SEF. Next one is power up at 16 20 00, radar and rate gyros on. Next one is D-4, D-7, 16 37 24, sequence 423 Alpha, mode 08, pitch 30 down, yaw 42 left, speed 60. Next one is computer, 16 45 00, power up. The next one is a radar test, 16 46 02. sequence 09, pitch 30 down, yaw 07 left. The next - will be complete at 16 55 00. Radar off, aline SEF. Next one is a platform test at 17 05 00, sequence 01. The next one is the other platform test at 17 21 43, sequence 02. And we have a change on the stars, it will be Venus instead of the Southern Cross and Fomalhaut instead of Pollux. Next one is S-8, D-13 at 18 16 14, sequence 03, pitch 30 down, yaw 22 left. The last

one is apowered down at 18 25 00, computer off, platform off and rate gyros off. Do you copy?

Conrad

. . . .

Cap Com

Roger, and would you turn your radar off now please.

Conrad

Roger, radar off.

Cap Com

Ok. You look real good here on the ground. Do you have any questions on the experiments?

Conrad

No. I'll tell you we got a full day. I hope we can get them all done.

Cap Com

Yeah, it should bunch up a little bit sometimes, but we tried to plan them so you have time in between. If you have any questions as you go along, just ask and we'll be standing by.

Conrad

Okey,dokey. How's the weather back there in Houston?

Cap Com

Gemini 5, Houston .

Conrad

I say, how's the weather back there, Houston?

Cap Com

Oh, it's real nice. Just hot and sunny, as usual. No rain in particular. Every once in a while a little thunderstorm.

Conrad

Roger.

Cap Com

Say we've noticed that the temperature up there is a little cooler than we expected. How is your comfort?

Conrad

Cold.

Cap Com

Cold, huh? Have any rain up there?

Conrad

We're taking the inlet hose of our suits every once in a while to warm up. We've got quite cold.

Cap Com

Roger. Understand.

Conrad I wish you'd tell John Yardley I'm gonna have to eat crow on that. We've had the suit set on the full-hot position. And we had both suit flows down to . . . and we still get cold.

Cap Com Roger. Understand.

Conrad I guess both those coolant loops really did it.

Cap Com Rog.

Flight Hey, Gemini, this is Houston Flight.

Flight Gemini, Houston, go.

Conrad For your information, the relative humidity has been running around 56 to 59 percent.

Cap Com Roger. Understand, 56 to 59. That's nice and dry.

Conrad Yep.

Cap Com Wish we were up there.

Conrad Say again.

Cap Com Wish we were up there.

Conrad After another day or two, I'll be glad to trade with you.

Cap Com You got a deal.

See How many peanut cubes you got left.

Conrad I haven't found any yet but we're collecting an awful lot of stuff.

See How much of that stuff are you having left over from the meals?

Conrad Hey, Elliott, Gemini 5.

See Go.

Conrad What's the deal on the hydrogen - it seems to be going down fairly fast.

See Yeah, it's venting and we expect it to be going down pretty fast. We're watching it very closely. It's following the

predicted curves.

Conrad Roger.

Flight Hey, Gemini 5, this is Houston Flight.

Conrad Go ahead, Flight.

Flight That's just about exactly the way it was predicted prior to lift-off. There's been hardly any difference at all -we can't measure the difference between preflight predicted and what we're getting right now.

Conrad I see.

Cap.Com Gemini, your O₂ pressure's around 115 now, in case you're interested.

Conrad What temperature?

Cap Com No, you O - your oxygen pressure is around 115. You've done real well pumping it up , up there.

Conrad Yeah.

END OF TAPE

This is Gemini Control, 69 hours, 32 minutes after lift-off. Gemini 5 is now over the southwest Pacific, north of New Zealand, and nearing the end of the 44th revolution. During the Canarvon pass 8 minutes ago, Pilot Conrad said the Gemini 5 was "go" from the crew standpoint, and that the cooler-than-normal suit temperatures were correcting themselves. Canarvon reported that Gemini was "go" from the telemetry read-outs. We now have a tape of this pass over the Canarvon station. Let's roll the tape now.

Canarvon Cap Com Gemini 5, Canarvon. We have a valid oral temp. Stand by for Surgeon.

Canarvon Surgeon Gemini 5, Canarvon Surgeon. Standing by for your first blood pressure.

Conrad Roger. Coming down. Your cuff is full scale.

Canarvon Surgeon We have your blood pressure. Standing by for exercise on your mark.

Conrad Roger. Mark. The cuff is full scale.

Canarvon Surgeon Now we have your second blood pressure. On your food report, if you could, give it to us by day and letter, and if you remember the items which you did not eat.

Conrad Alright. OK. The water is 15 pounds.

Canarvon Surgeon Roger.

Conrad 8 ounces, and I am presently eating meal 3A, and I've pretty well been eating the dehydrated foods, but not the solid.

Canarvon Surgeon Roger. Sleep report now?

Conrad Yeah, I slept about 4 hours last night on the nap period, and I slept about $2\frac{1}{2}$ on the 2-hour nap period.

Canarvon Surgeon Roger. Anything else to report?

Conrad Nope.

Canarvon Surgeon Roger. Canarvon Surgeon out.

Canarvon Cap Com Gemini, Canarvon Cap Com. What is the position of your suit temperature control valve?

Conrad Roger. I'll give you a number reading. It's just off number eight.

Canarvon Cap Com Is it 4 o'clock warm?

Conrad No, not quite.

Canarvon Cap Com Are you too cool?

Conrad No, we were last night. It gets pretty cold in here with two coolant loops running.

Canarvon Cap Com Roger.

Conrad Our suit temperatures run down around 44.

Canarvon Cap Com Roger. Copy, 44.

Conrad Yeah, we've got it running up around 50 right now.

Canarvon Cap Com Roger.

Houston Flight Canarvon Cap Com. This is Houston Flight.

Canarvon Cap Com Flight, Canarvon. Go ahead.

Houston Flight Point out to him that if that thing is in the full warm position, it cuts off the coolant supply completely.

Canarvon Cap Com Roger, Flight.

Houston Flight So it has to warm up under those circumstances.

Canarvon Cap Com Roger. Gemini, be advised that that temperature control valve is in the full clockwise, or full warm position. It should cut off the coolant loop.

Conrad Yeah, I think we discovered that.

Canarvon Cap Com Roger.

Conrad Now we're go up here.

Canarvon Cap Com Roger, Gemini. You look real good down here, also. We have the initial size of the booster which is following you about 8 minutes, about 10, 15 minutes ago.

Conrad Roger.

Canarvon Cap Com There's a question on that. It's about 36 minutes ahead of you.

Conrad Oh. How's everything going down there? We keeping you busy?

Canarvon Cap Com Very busy. Got up this morning about noon, the piano player at the... got us up, we had a delicious meal at, and then came to work.

Conrad Roger. Give my best to all my friends down there, please.

Canarvon Cap Com Will do, Pete. They send you their regards also, they miss you.

END OF TAPE

This is Gemini Control, 70 hours and 2 minutes after liftoff.
Gemini V is now over the Gulf of Mexico and in contact with the
State side stations nearing the end of the 44th revolution. We expect
to have a tape of this pass which we will play back for you within the
next 10 to 15 minutes. This is Gemini Control.

END OF TAPE

This is Gemini Control, 70 hours, 14 minutes after lift-off. We now have a tape of the last State-side pass by Gemini 5. We'll hear this tape now.

Cap Com Gemini 5, Gemini 5, Houston Cap Com.

Conrad Go ahead, Houston. Gemini 5 here.

Cap Com Rog. You're looking good here on the ground. We'd like to get a number of readouts from you for correlation with our T/M data. First, could you give us your cryo-quantity readout in all three positions, please?

Conrad ECS O₂ - 87 percent. 790.

Cap Com Rog. Understand. 87 percent, and 790.

Conrad Roger. Fuel cell O₂ 91- $\frac{1}{2}$ and 100.

Cap Com Roger. 91- $\frac{1}{2}$ and 100.

Conrad Hydrogen is 82 percent - maybe just a notch above that - make it 82.5 and about 785.

Cap Com Rog. 82.5 and 785. Next could we have your OAMS source pressure and temperature, please.

Conrad OAMS source is 50 and 50.

Cap Com Roger. 50 and 50. And your OAMS regulator pressure, please.

Conrad The OAMS regulator pressure - the temperature is 50 and the pressure is 50-50.

Cap Com Roger. I understand. 50 and 50. Next the RCS ring A - source pressure and temperature.

Conrad I'll say again. The OAMS source temperature is five-zero, the pressure is one-five-five-zero.

Cap Com Rog. Five-zero and one-five-five-zero.

Conrad Roger. Going to your RCS ring A - temperature is 65, 290.

Cap Com Roger. Temperature 65 and 290 pressure. Ok. RCS ring B.

Conrad 63, 285.

Cap Com 63 and 285. And your propellant quantity, please.

Conrad 40 percent.

Cap Com Roger, understand. 40. Thank you. Could we have another read on your OAMS regulator pressure, please.

Conrad Roger. You're keyed. Hello, Houston.

Cap Com Go ahead.

Conrad The OAMS regulator source pressure - 1550.

Cap Com Gemini, could we have your regulator pressure, not your source pressure - your regulator pressure.

Conrad Ah, Roger. Sorry. Fuel is 50, 300.

Cap Com Roger, understand.

Conrad Anything else, Houston?

Cap Com Yeah, Elliott wants to talk to you about the H_2 here.

See Pete, I'd like to give you a little further briefing on to expect on this fuel cell hydrogen. As you'll notice, you've used about 20 percent over the past three days and you can now start expecting a rate of about 23 percent per day until you get down to about 25 percent remaining. And then the curve will flair out there and decrease at a slower rate and it's a little bit unknown at that point. We'll have to wait and see how it goes down in there as to just what it will behave like. We are venting now and that's why it's going down so rapidly.

Conrad Ok. And would you give me one more detailed information on this radar test 09. You want us to acquire it the first time, in the rendezvous mode or should we be in catch up for acquisition?

See You can be in rendezvous. That's ok. As you approach the target, you can have a readout going on 69 and it shouldn't change,

as I understand it, it shouldn't change until you actually acquire the target and start reading out some range. And then once you get a range readout, you can start into your cycles.

Conrad I'm with you.

See Is it clear, otherwise?

Caonrd Say again.

See Is it clear otherwise?

Conrad I think so.

See Ok.

Flight Morning, Peter, how are you this morning?

Conrad Fine. Who's that? Mr. Kraft?

Flight That's right.

Cooper Morning, Chris.

Flight How are you, Gordo?

Cooper Pretty fine.

Flight You both sound great.

Cooper Good.

Conrad We discovered one thing. Gordo's beard is white.

Flight Rip Van Winkle.

Cooper That's right

Conrad Nope. Santy Claus.

Flight Doing a great job up there.

Cooper Thank you, Chris.

Conrad Listen, after these next eight passes, we look like we're awful busy. I hope we get it all done for you.

Flight Do what you can. That's all we want.

Conrad Roger. Say, I want you to tell John Yardley I really was wrong. Boy, those two cooler loops on there really cool things down.

Flight Yeah, that's one of the reasons we want to power up here to see if we can't warm things up a little bit.

Conrad That's be great. We've both been sitting here shivering all - the last few hours.

Cap Com Did running that suit temperature up to full warm help out any there, Gordo.

Cooper When we get it on full warm, if you run it completely to full warm, it shuts the flow completely off.

Cap Com That warms it up a little bit, doesn't it?

Cooper Yeah, but aren't we apt to get a little bit too cool on the radiator business that way?

Cap Com Negative.

Cooper No?

Cap Com No.

Cooper Ok. We'll turn it clear off, then.

Cap Com They're monitoring the coolant loop temperature here on the ground, and they'll let you know if it gets too cool.

Cooper Ok. You should have seen . . . -last night, handling all the nuts and bolts and the screws rebuilding that reticle.

END OF TAPE

This is Gemini Control, 70 hours 32 minutes after lift-off. Gemini V spacecraft is now over Central America, one-third of the way through the 45th revolution. During the recent pass over the Canary Islands station, spacecraft communicator Keith Kundel told the crew of Gemini V that he had nothing for them this pass, only a C-band radar track. This is Gemini Control

END OF TAPE

Good morning. This is Gemini Control. We have just completed a rather long and very silent pass across Carnarvon. The spacecraft now to the East Coast of Australia on the 45th rev around the earth. As we come up across the Pacific over Canton Island, the flight plan calls for the crew to aline the platform, small-end-forward, and then as we swing across the States, they will take another long look at those eye charts 40 miles north of Lorado. We hope with more success than they had in that area yesterday. The Pilot, Pete Conrad, read out some of his values on the hydrogen storage and the oxygen reactant supply at the start of the Carnarvon pass. There was no other conservation. This is Gemini Control at 71 hours 3 minutes into the mission.

END OF TAPE

This is Gemini Control, 71 hours 32 minutes into the mission. Two minutes ago the spacecraft came in touch with the Guaymas station, now proceeding across Mexico and we expect this to be an extremely quiet pass because they, with the reticle fixed, Gordon Cooper fixed it last night, the boys are going to try a very determined effort to site on those squares 40 miles north of Laredo. If there is conversation, we'll cut in and listen to it, but if not, or until there is, let's cover some other things. The breathing oxygen onboard, the quantity is 86 percent, the environmental control system oxygen tank pressure shows 940 pounds per square inch. The fuel cell oxygen supply is riding at 91 percent and it is showing 115 pounds per square inch, up again better than 10 pounds from yesterday at this time. Fuel cell hydrogen quantity is 81 percent, it's pressure level is 35+ pounds. During the last 8 hours, apparently the Pilots got a little bit chilly. There was some concern, some hesitancy, about regulating the suit temperature controls, and the suit inlet temperature got down to about 45 degrees. Gordon Cooper then, went ahead and did adjust it upwards, the suit inlet temperature is now about 50 degrees. We expect that it will slowly climb up to about 54 degrees -- 54 to 55 degrees which has been the most comfortable level in past flights. That's a suit inlet temperature which consistently runs about 5 degrees or more below the actual suit temperature. We have onboard, 155 pounds of maneuvering fuel remaining. We expect to use some 15 to 20 pounds. Jim McDivitt is in touch with Pete Conrad now, and at Laredo we are advised that they have hit some smoke signals, as an additional acquisition aid. Let's cut into that conversation now alive.

Conrad Right smack over the site.

Houston Cap Com Okay.

Conrad We had no trouble tracking it, we had no trouble picking up the smoke, but we did not see the squares, either one of us.

Houston Cap Com Okay Pete, I'll check and make sure that they had the smoke and I'll give you that information over the Canarys, okay. As a matter of a fact, we'll try to get it for you before you leave the States.

Conrad You ready for our onboard readings?

Houston Cap Com Say again?

Conrad Are you ready for our onboard readings?

Houston Cap Com Roger, go ahead.

Conrad Okay, the A bus is 26.0 volts, the LA stat current is 8.1, 1B is 8.0, 1C is $9\frac{1}{2}$. 2A is 7.0, 2B is 6.9, 2C is 8.5.

Houston Cap Com Roger.

Conrad RCS ring A is 65 degrees, 295 is the pressure, RCS ring B is 60 degrees, and 285, secondary O₂ left is 5400, right reads 5300. We are go for 47-1 as you are.

Houston Cap Com Roger, you have a go, you have a go for 62-1.

Houston Flight Gemini V, this is Houston here, did you get your go?

Conrad Roger, we got a go from you. We were just whistling over Houston here. We wanted to get some pictures.

Houston Cap Com Okay, I've got some other information here for you. You don't have to bother to acknowledge most of it.

We'd like to have you be aware that we want you to do a medical data pass on the Command Pilot over the Canarys.

Conrad We got that, have you got an AOS time?

Houston Cap Com Roger, it'll be at 03 13 47 01.

Conrad Roger.

Houston Cap Com We'd like to know what condition your in with the suit gloves and helmets. Do you have the gloves and helmets off or on?

Conrad Oh, about the time you gave us a go to pass 6-4 we took off the helmets and gloves and we haven't had them on since.

Houston Cap Com Okay, very good.

Conrad Now Gordo's not wearing the cuffs on his wrists and I am, that's just because I got use to it. The relative humidity has stayed down around 56 percent all the time so we feel we are in good shape that way.

Houston Cap Com Okay, how about the

Conrad Say again Houston.

Houston Cap Com Roger, are you wearing your neck dams?

Conrad That's affirmative. We've been wearing the neck dams the whole time.

Houston Cap Com Okay. .

Houston Cap Com We'd like to know if your staying warm now. Do you have the cooling under control?

Conrad Yeah. Our problem is that the temperature really doesn't

change in here too much, but when either one of us go to sleep, we're just not putting out too much ourselves and we really chill down.

Houston Cap Com Yeah, I noticed that a little too. Listen, one thing I want to tell you about, don't worry about turning the coolant off into cockpit. We've got some excellent TM on the radiator outlet temperatures and we'll keep you advised if they go down, so don't worry about turning off the coolant to the suit loop or the cabin loop.

Conrad Okay. Boy, Florida is really clear today. I can see Jacksonville and all the streets in it and the Cape and all the way down to Miami.

Houston Cap Com Very good, very good.

Conrad Florida is really pretty out there today.

Houston Cap Com Can you give us a couple of general comments on house-keeping. Are you keeping the stuff under control?

Conrad Yeah, but we are going to have a lot in the end. I'd like to tell you right now, I've got three airplanes in sight flying off Jacksonville.

Houston Cap Com Well, very good. We'll run a separate visual acuity test here.

Conrad Yeah, we may not sight a target, but we are seeing all kinds of other things.

Houston Cap Com Roger, roger.

Conrad Yeah, we're keeping housekeeping under control, but it takes a great deal of time.

Houston Cap Com Rog. How's that bag working out behind the seat, Pete?

Conrad It's full.

Houston Cap Com All ready?

Conrad With gear that has other places to go later.

Houston Cap Com Oh, okay. Be advised you've got a good 47-1 load in.

Conrad Roger.

Houston Cap Com Are you having any trouble with those blue bags?

Houston Cap Com Gemini V, Houston here. Gemini V, Houston here.

Conrad Go ahead Houston.

Houston Cap Com How many of the blue bags have you had to use?

Conrad One.

Houston Cap Com Roger.

Conrad Houston, Gemini V. Do you want us to leave the computer up?

Houston Flight Gemini V. Houston here. You can go ahead and power down the computer now.

Conrad Roger, computer coming down in just a second.

Houston Cap Com Gemini V, Houston here. Do you still read?

Conrad Read you loud and clear.

Conrad out.

Houston Cap Com Okay.

Conrad .. comfortable.

Houston Cap Com You say you are comfortable?

Conrad Yeah.

Houston Cap Com Yeah, it's pretty nice floating around, isn't it?

Conrad Yeah.

Houston Cap Com Hey listen, you were the big singing star of television last night.

Conrad We did what?

Houston Cap Com You were a big singing star on television last night. You got requests for thousands and thousands of copies of that song you sang.

Conrad I'll tell you the story about where those words came from when I get back. That's quite a good story also.

Houston Cap Com Okay.

Hodge We always have this levity first thing in the morning. The red team comes on, then the jokes come on.

This is Gemini Control Houston here again. We don't expect much more conservation with the spacecraft out in the far eastern edge of the Bermuda area. You heard Jim McDivitt reference a "blue bag". This is a reference to a fecal bag. Pete Conrad confirmed that there had been at least one bowel movement to date during the flight. We are not exactly sure which Pilot had the bowel movement. The go for the 62-1 area was given by McDivitt on instruction of Chris Kraft. At the time of the go it was 7:36 a.m. c.s.t. Our present orbit is 124 miles perigee, that's statute miles, 192 miles apogee, that's statute miles, with an estimated lifetime of 16 days without any further adjustment. Our period is 94.4 minutes. Dr. Berry says he is very satisfied with the crew. They sound sharp, he

says. He notes that they are eating again, still a little less than had been planned. They are getting about 2000 calories per day,* and eating about 2 meals a day, and not eating all of the meals. He is completely satisfied on the water intake and apparently this is enough food to keep them going, he says. Last night, we know Pete Conrad got about $6\frac{1}{2}$ hours of sleep. We are not sure about Cooper, but we have a medical data pass coming up over the Canaries in a very few minutes and should have a very good report on his sleep. This is Gemini Control Houston out at 45 minutes after the hour.

END OF TAPE

*This is a transcript correction. Commentary originally stated "2000 calories per meal". What was meant was "2000 calories per day".

Gemini Control here at 72 hours 18 minutes into the mission. We are now in our 4th day. The weather this morning goes like this, from the U.S. Weather Bureau Space Flight Meteorology Group. It advises that weather conditions around the World continue very good for orbital operations during the next 2 days and probably longer. The four planned landing areas are all located within broad zones of generally good weather which is characteristic of latitudes near 30 degrees north of this time of the year. The West Atlantic landing area between Florida and Bermuda has partly cloudy skies, with intermittent ceilings of 1500 to 2000 feet. Winds are less than 10 knots, and the waves are 2 to 3 feet. In the East Atlantic area, some 300 miles west of the Canary Islands, skies will be partly cloudy with infrequent ceilings of about 1500 feet. Winds will be near 15 knots and waves about 4 feet. In the Mid-Pacific area, 500 miles north of Honolulu, broken cloudiness will produce ceilings near 2000 feet most of the time. Winds are a little stronger than usual, averaging close to 20 knots and the waves are running around 5 feet. In the far West Pacific area, about 500 miles southwest of Tokyo. Skies are partly cloudy and ceiling, usually unlimited. Winds will average less than 15 knots and seas of about 4 feet. Tropical storm "Anna" first of the season in the Atlantic Ocean, formed far north of the usual storm generating area. It's present location is close to 500 miles north of the ground track of Gemini V, but could be seen by the Gemini astronauts while over the mid-Atlantic Ocean. Tropical storm "Doreen" meanwhile, centered about 1000 miles south and 500 miles west of San Diego continues it's westward movement of about-- at about 10 miles per hour. Extensive cloudiness and showers over the

Caribbean and the islands of Cuba and Hispaniola show no indication of being organized in any specific pattern. Otherwise, conditions around the world remain about the same as yesterday. With the spacecraft now over the Indian Ocean, the Pilots will slightly before Carnarvon acquisition, be in an S-1 experiment. This is the Zodiacal light experiment which will go on for some 20 to 30 minutes during the nightside pass. Toward the end of this nightside pass, up in the area of Hawaii, they will purge both the -- both of the sections of the fuel cell and on both sides of the diaphragm, the oxygen side as well as the hydrogen side. Later, over the States, between Texas and the Cape, they will take some D-6 photography and again out in the area of Bermuda, they will take D-6 pictures possibly of a Carrier, just as we attempted to get yesterday, perhaps we will have better luck today with the reticle repaired. We have the Carnarvon conservation wrapped up and ready to play for you, and let's roll that tape now. I'm sorry, it's not the Carnarvon, it's the Canary Islands tape.

Canary Surgeon

Canary Surgeon Gemini V, Canary Surgeon. Your cuff is full scale.

Cooper Roger.

Canary Surgeon We have a good blood pressure. Give me a mark when you begin exercise.

Cooper Roger. Begin exercise now. Ending exercise now.

Canary Surgeon Gemini V, your cuff is full scale.

Houston Flight Canary Cap Com, Houston Flight.

Canary Cap Com Flight, Canary Cap Com.

This is Gemini Control at 72 hours, 32 minutes into the mission. The astronauts have just completed a rather quiet pass across the Canarvon site in which they asked for ground quiet while they worked with their cameras to get the zodiacal light pictures. Conrad reported that the first phase of the picture taking went extremely well. Stand by one minute to see if we have this tape racked up. I am sorry it is not ready for you. When it is ready, we will play it. This is Gemini Control out.

END OF TAPE

Houston Flight On the pass over Laredo

Canary Surgeon We have a good blood pressure, standing by for your
water and sleep reports.

Houston Flight Stand by, I'll listen.

Cooper Roger. My water report, I've had 16 pounds and 4 ounces
of water, last night I had about 2 hours of sleep during
my nap period and about another 2 to 3 -- about 3 hours
of sleep during my long sleep period.

Canary Surgeon Roger. This is Canary Surgeon. Could you give me
an estimate of the quality of your sleep, also Houston
Surgeon has asked us to get a food report from you.

Cooper Roger, the quality of my sleep was better in my short
nap period than it was in my long sleep period. It
was quite deep during my short sleep period. As for
the food, I just ate, I believe it was 3 -- meal 3
charlie.

Conrad 3A was the last one I had. 3 alpha was the last meal
I just had at 03:12:30:00.

Cooper Okay, go ahead Canary.

Canary Surgeon Would you repeat that please, this is Canary Surgeon.

Conrad Roger, meal 3 alpha was the last meal I had, at day 3,
that's today. 12 hours 30 minutes, 00 seconds was the
start of the meal.

Canary Surgeon Roger. We copied.

Canary Cap Com Go ahead Flight with what you wanted over Laredo.

Houston Flight Okay, over Laredo, there was smoke on the northwest corner of the target.

Cooper in that small cabin.

Houston Flight It was streaming toward the northwest about 3000 feet long.

Canary Cap Com Roger, copied. A smoke over Laredo was to the northwest about 3000 ...

Houston Flight In the northwest corner of the target.

Canary Cap Com And it was 3000 yards long, huh?

Houston Flight Feet, feet.

Canary Cap Com Okay.

Canary Cap Com Gemini V, Flight advises that over Laredo the smoke was at the northwest corner of the target, approximately 3000 feet long.

Conrad Roger, thank you very much. We saw the smoke loud and clear and we assumed it was the northwest corner, but we were unable to see the target. I think probably due to the slant angle.

Canary Cap Com Roger.

Canary Cap Com Flight, we've got about 50 seconds left.

Houston Flight Who is on this loop. Get off the loop. Who is counting on this loop please, and if you are, get off.

Canary Cap Com Flight, we're not reading it out here.

Houston Flight Roger.

Canary Cap Com Roger. We've had LOS.

Houston Flight Roger, Canarys.

END OF TAPE

Gemini Control, Houston here; 72 hours, 38 minutes into the mission.

We have the Canarvon tape ready for you now. It's a brief pass, and we will play it for you at this time.

Conrad Canarvon, Gemini 5.

Canarvon Cap Com Gemini 5, Canarvon. Go ahead.

Conrad Everything green up here. Unless you have something for us, we're very busy.

Canarvon Cap Com Roger. I'll up-date your TR for a 62-1, about mid-pass.

Conrad OK. Give me a call before you do it, because we're rolling the camera in the window when the light comes on.

Canarvon Cap Com Roger. Will do.

END OF TAPE

Gemini Control, Houston here; 73 hours, 2 minutes into the mission.

In this pass across the States, we expect contact momentarily from the Guaymas station. We have knocked out the planned D-6 experiment which was to have been done in the Dallas area. It's been scrubbed because of weather in the Dallas area. We will, however, attempt a high resolution photographic experiment out over the carrier on the eastern edge of this pass. We have the tape of the Hawaii conversation ready for you, and we will play it for you at this time.

Conrad. Hawaii, Gemini 5. We're doing the F-1. Would you please check the speeds on the cameras with the D-6. I believe they should be 125th of a second, rather than 60th of a second; and one two fiftieth.

Hawaii Cap Com Roger. Will do.

Houston Cap Com We'll get you an answer on that.

Hawaii Cap Com OK, flight.

Houston Cap Com We want to delete the D-6 anyway. We've got a weather problem.

Hawaii Cap Com Roger. We want to delete that D-6 anyway. We've got a weather problem.

Houston Cap Com Stand by on that. Just one of the D-6's we're going to delete.

Conrad Both of them?

Hawaii Cap Com Negative. Delete the D-6, the time is 150856.

Conrad OK. That's the one over Texas.

Hawaii Cap Com Roger.

Houston Cap Com Affirmative.

Conrad Flight, listen, with this Questar lens, tell them we're going to pick a good sight somewhere going across the U. S. and get it.

Hawaii Cap Com Roger.

Conrad Afterall, we're in the process of rigging for it, and we'll be rigged for it for the one off the coast.

Hawaii Cap Com Roger.

Houston Cap Com That's right. We're working on those settings right now, Hawaii.

Hawaii Cap Com Roger, flight. They are working out the settings, Gemini.

Conrad Roger. My information up here says 127.

Hawaii Cap Com Roger, roger.

Conrad Hawaii, Gemini 5. Do you want this extra 1 and 2 purge?

Hawaii Cap Com That's affirmative.

Conrad Coming up right now.

Hawaii Cap Com Roger. Give me a mark.

Conrad Roger.....hydrogen purge commencing, now. No. 1
purge hydrogen complete. Commencing no. 2 hydrogen
purge on my mark, mark. No. 2 hydrogen purge complete.
Stand by for oxygen purge No. 1. Commencing no. 1

O₂ purge now.

Houston Cap Com

One 160th and one 125th, as they suggested.

Did you copy, Hawaii?

Hawaii Cap Com

Roger. We copy. Gemini 5, we're coming up on

LOS. Those settings for your camera is one - one
twenty-fifth, and one - one sixtieth.

Conrad

Hawaii,.....

Hawaii Cap Com

Roger. Flight, Hawaii.

Houston Cap Com

Go ahead.

Hawaii Cap Com

OK. We've had LOS, so you might pass that up over
Guaymas again.

END OF TAPE

This is Gemini Control Houston, 73 hours 23 minutes. In the last pass across the States, the Gemini V crew went through a fuel cell calibration exercise, and they also attempted to get a picture of a land object near Dallas, but the Dallas area was, as Gordon Cooper put it, "solid overcast" and they could not get a picture. They did, however, get a picture of a ship. They are not sure of whether it was the Lake Champlain, but this was the second picture planned for this pass, and they got a picture of a ship out, just west of Bermuda. They also received an update on the Zodiacal light experiment that they will do again on this present pass over the Carnarvon area. This will involve the use of the infrared sensors and the radiometer and they will take a similar measurement on the star "Deneb", D like in dog, e-n-e-b, in the same area over Carnarvon. This is a star that they had hoped to get similar experiments yesterday. They could not get because the reticle in Gordon Cooper's window was down and inoperative at the time. They generally reported that there were a lot of clouds over the States, they said in Texas, Houston was the only city that appeared to be open. We have the tape for you of the State side pass and will play it for you now.

Houston Cap Com Gemini V, Gemini V, this is Houston here. If you have time, give us a call. We have some information for you.

Conrad Roger, go ahead.

Houston Cap Com Okay, we'd like to have you put your cryogenic gauging switch to fuel cell O₂.

Conrad Roger, fuel cell O₂.

Houston Cap Com Okay. Are you through with your D-6 so I can give you some other stuff?

Conrad Roger, go ahead.

Houston Cap Com Okay, we'd like to have you put your calibrate switch to no. 1 position for 10 seconds. I'd also like to tell you that your target for your next D-6 will be going up track, so that the V wake will be downstream.

Conrad Roger.

Houston Cap Com I've got an update for your D-4, D-7 California background measurement whenever you are ready to copy. I also need your go for that over Carnarvon. I'd like to have you tell Carnarvon whether you will be ready to do it or not.

Conrad Okay.

Houston Cap Com Are you ready to copy the update.

Conrad Roger, go.

Houston Cap Com Okay, first put your calibrate switch to no. 2 for 10 seconds. Okay, here comes the D-4, D-7 update. New time is 03 16 37 28, pitch 26 down, yaw 38 left.

Conrad Okay, go ahead.

Houston Cap Com They are updating your TR over Texas and Bermuda so you will get a couple of DCS lights and stuff.

Conrad Okay.

Houston Cap Com I've got a map and star update for you also.

Conrad Roger, go ahead.

Houston Cap Com Okay, they are both at the same time. 03 16 17 37, the map is 162.5 degrees East, the star is 01 17 49.

Conrad All right.

Cooper What's the rev?

Houston Cap Com Stand by one.

Houston Cap Com Rev. 47.

Houston Cap Com And you can place your cryogenic gauging switch to off now.

Houston Cap Com Okay, that's all the information I have. Why don't you go ahead with your D-6 experiment.

Conrad Okay, we got a complete set of the Zodiacal pictures on the last night side.

Houston Cap Com Very good, very good.

Conrad Worked out okay on it.

Houston Cap Com Good.

Conrad I gave Gordo a well done for tracking tests. I really think we got some good ones.

Houston Cap Com Good.

Houston Flight Gemini V, Gemini V, Houston here.

Cooper Go ahead, Gemini V here.

Houston Flight How did you make out on your D-6 experiment?

Cooper Roger, there was quite a lot of clouds out there and we saw one ship with a wake. I don't really believe it was them, but we snapped a picture on it.

Houston Flight Okay. Did you pick up anything across the States

with your other D-6?

Cooper No, it was pretty solid undercast, it was all out West.

Houston Cap Com Yeah, that's why we scrubbed it, because of the bad weather.

Cooper Yeah, it's pretty solid out there all the way from the Coast on in, Houston was the only area that was really, it looked like it was open.

Houston Cap Com Okay.

Cooper Houston, Gemini V. Do we come anywhere near Austin next pass?

Houston Flight Well, it looks like you might be a little bit north of it there.

Cooper Okay

Houston Cap Com Why, are they open?

Cooper Yeah, they were when we went by, but we were too close in to yaw and gape.

Houston Cap Com Okay.

Houston Flight I'll take a look at that and see what we can do. You know, you are going to be pretty busy next pass anyway?

Cooper Well, we'll pick them up tomorrow. Maybe the weather will be better.

Houston Flight Okay.

END OF TAPE

This is Gemini Control; 73 hours, 32 minutes into the mission. We're on the 47th revolution and no contact since we left the Bermuda area. This 47th revolution began at 9:00 and 31 seconds, Central Standard Time. I would like to pass on to you a little background on this Red and White control team. We're configured, as you know, in four tiers here in the Mission Control Center. Starting down on the front tier on the left as you face from the top, the tank pressure monitor during the launch phase was Charles Bassett, Astronaut Charles Bassett. He is 33 years old; born in Dayton, Ohio; has a bachelor's degree in electrical engineering from Texas Tech in Lubbock. To his right is the booster-systems engineer who doubles in brass and is also assistant flight director; he is William Platt, 29, from Eunice, Louisiana; has a B.S. degree in mechanical engineering from the University of Southwest Louisiana in Lafayette. Our retro officer is Thomas F. Carter, 27, of Quitman, Mississippi; he holds a B.S. degree in civil engineering from Mississippi State. Our guidance controller is Charlie Parker. That's his full and official name, Charlie Parker; 31 years old; a native of Concord, Texas; holds a B.S. degree in electrical engineering from Lamar Tech in Beaumont. Our surgeon, Doctor Charles Berry, is 41. He was born in Rogers, Arkansas; holds a medical degree and a degree of Master of Public Health; his medical degree from the University of California, his Master of Public Health degree from Harvard. The flight dynamics officer is Jerry Bostick, "b" as in boy, O-S-T-I-C-K. Jerry is 26 years old; a native of Golden, Mississippi; holds a bachelors degree in civil

engineering from Mississippi State. Our capsule communicator, Jim McDivitt, 36 years old, from Chicago, holds a bachelor's degree in aeronautical engineering from the University of Michigan. Our ECOM officer and electrical, environmental, and communications officer is Richard Glover, age 30, native of Chicago; holds a B.S. degree in electrical engineering from the University of Texas, and a master of science and electrical engineering from Stanford. The guidance, navigation, and control officer is Gerald Griffin, age 30, native of Athens, Texas; holds a B.S. in aeronautical engineering from Texas A and M. Our operations and procedures officer is Jones Roach, first name Jones, J-O-N-E-S, Roach, age 32; a native of Richmond, Virginia; holds a B.S. degree in electrical engineering from Virginia Military Institute. Our network controller is Ernest L. Randall, age 30, from Oklahoma City; he holds a B.S. degree in chemistry from East Central State College in Oklahoma. Our flight director, of course, is Chris Kraft. He's 41 years old; a native of Phoebus, Virginia; holds a B.S. degree in aeronautical engineering from V. P. I. This is Gemini Control at 73 hours, 36 minutes into the mission.

END OF TAPE

This is Gemini Control; 74 hours, 2 minutes into the mission, and the Canarvon station has just established contact. The pilots reported they were performing their sight logs and taking their infrared readings on the star Deneb. It's a relatively quiet pass. The crew is advised they would have a medical data pass over Hawaii this pass, and Hawaii should acquire in about 20 minutes. Let's see--I believe that wraps up all the information at this time. This is Gemini Control out.

END OF TAPE

This is Gemini Control; 74 hours, 22 minutes into the mission. We have a brief, about a minute and a half, of conversation over the Canarvon station. It's racked up, ready to play it for you now. Got a little mechanical difficulty there, rolling the tape. We'll stand by one until it's ready. Let's break and come back to it.

Conrad Canarvon, Gemini 5. We're doing 409 at this time, equipment is on.

Canarvon Cap Com Say again the last, Gemini.

Conrad Roger. We're doing 409 at this time, equipment is on.

Canarvon Cap Com Roger. We're receiving your FM, FM telemetry.

Conrad OK. Give me a mark in four minutes, please.

Canarvon Cap Com Roger.

Conrad Be advised, Canarvon, we'll be go for 423 alpha.

Canarvon Cap Com Roger, understand. We've got an up-date for you. They have a medical pass scheduled on the pilot at Hawaii this round. Hawaii's acquisition is 16 24.

Conrad Roger, 16 24.

END OF TAPE

This is Gemini Control, Houston, 74 hours 36 minutes into the mission. Over the last Hawaii pass, Gordon Cooper reported he finished meal C, which includes an orange drink, spaghetti and meat, butterscotch pudding, toasted bread cubes and cheese sandwiches. The Hawaii Surgeon said he noticed, what he interpreted was little shiverings and squiggles on his oscillograph reading out blood pressures and respirations. He ask the crew about this and they said, well, it probably came from an earlier reading. Conrad reported he was working up a good appetite. We are in contact right now with California station. Ten seconds ago we launched a Minuteman, the Department of Defense confirmed, and Pete Conrad just came up on the loop and said, "I see it, I see it." He sounds quite elated. He just said, "there it goes", they are orienting the spacecraft so they can get both photographs of that Minuteman launched out of Vandenburg Air Force Base at, we would judge very close to 38 minutes after the hour. We are standing by for further word on the flight itself. There's Conrad again, he says, "he's out over the water, see him." Conrad picked it up at about 10 seconds out and now we have an indication that the second stage has ignited and Conrad says, "Okay, we can see them real good." Standing by for further word on the flight of this Minuteman. Conrad says, "We can still it very clearly, we can also get a good background on it." Barely quite visible." And now apparently the booster, the Minuteman is out of sight of the Gemini V spacecraft. But, it sounded like a most successful test in an experiment aimed at finding out how well a crew in space can

sight an object launched from the ground and keep their spacecraft tightly aligned on it and get photographs of it. We have no word yet on the burnout or the path of the Minuteman. We should have additional information for you momentarily. We are now over Texas, and let's cut in on the conversation live.

Conrad

Houston Cap Com Say again.

Conrad Wait a minute, we're getting something on the horizon scan.

Conrad Holloman right now, and I can see the runways of the whole

Houston Cap Com Say that again please.

Cooper We are tracking Holloman Air Strip.

Houston Cap Com Okay, I got you. Very good. Did you get a picture of that other thing.

Conrad I got about 6 of them.

Houston Cap Com Very good.

Gemini Control here. The crew, last report, was tracking the Holloman Air Force Base in West Texas. No further reports since then. We show them on our maps here as directly over Texas. Stand by for additional conversation.

Gemini Control here. The flight plan calls for the Pilots to turn the computer on over the Cape to perform another radar test with their onboard radar. We'll see how it goes immediately after leaving the Antigua area, they will turn off the radar and aline their platform small-end-forward.

Conrad Okay, we got Bergstrom that time too.

Houston Cap Com Very good. Sounds like you are getting caught up on D-6.

Conrad Yeah, I hope so. Okay, we're going to 30 pitch down, yaw 7 left, and we're standing by for radar.

Houston Cap Com Okay, fine. You got that procedure all squared away, haven't you?

Conrad Right, we'll go to rendezvous and then back to catch-up after lock-on for second, back into rendezvous and keep that cycle up till we loose lock again.

Houston Cap Com Okay, very good. Do you have your FDI's up?

Conrad Confirmed.

Houston Cap Com Okay, are you going to be pointing at the transponder?

Conrad Yeah, you can track it.

Houston Cap Com Okay, very good.

Conrad Okay, we have solid lock.

Houston Cap Com Okay, kind of keep your eye on the FDI needles if you can as you go across and give us a little report on them.

Cooper Roger, I'm reading range, range rate,

Houston Cap Com Okay.

Cooper I'm locked on.

Houston Cap Com Very good.

Conrad I haven't gotten anything to read into the rendezvous mode yet.

Cooper My FDI's are locked.

Houston Cap Com Okay, are they null?

Cooper Rog.

Conrad I won't read into the rendezvous mode. Do you want me
to go to Catch-up?

Houston Cap Com Yeah, cycle it back and forth and see what happens.
Did you get the start comp button pushed there?

Cooper Locked on good with the ...

Houston Cap Com Okay.

Cooper Proceed with the reticle.

Cooper Holding lock as we go straight across.

Cooper Is it out at Merritt Island?

Houston Cap Com I don't know, just a second.

Houston Cap Com We've got the coordinates to 4 decimal places in seconds,
but I don't know where it is.

Cooper My radar is showing it's right on Merritt Island out
there.

Houston Cap Com Okay.

Cooper I'm still locked on.

Houston Cap Com Okay.

Conrad I don't understand. I'm not getting any range readout
either in Catch-up or Rendezvous.

Houston Cap Com Roger. You got the start comp button.

Conrad Yeah, I've tried everything.

Houston Cap Com Is the MDIU on?

Cooper Well over 250 miles an hour now I guess.

Houston Cap Com Did you have the MDIU power up?

Conrad Yeah.

Houston Cap Com Okay.

Cooper I'm still locked on. We're over 300, I guess now.

Conrad Well you'll have the data on the tape through, won't you.

Houston Cap Com We hope we do, yes.

Conrad Squeeze off a couple of D-6's go by there too. He was pointed right at it.

Houston Cap Com Okay.

Cooper Just broke lock.

Houston Cap Com Roger, broke lock at 40 47.

Gemini Control here. We are out on the Eastern edge, approximately 1000 miles east of the Cape now. But you heard what real good success Gordon Cooper had with that onboard radar, locked onto an L-band signal from the Cape and was still holding it and reporting good values at a range of 300 miles. Here in the Control Center we were watching closely the, Dr. Berry's oscillograph, which gives us the heart beat and the respiration information. During that Minuteman launch out on the West Coast, we noted some slightly elevated values, which would be an indication of the pickup of work. It certainly was a fast working, hard working 6 minute pass. Now, Jim McDivitt is trying to raise the spacecraft again, let's go back.

Houston Cap Com .. purge out the fuel cells. We want to do it over a site so we get some good data while we are doing the purge. We don't really have much else for you. We got about another 6 or 7 minutes here of acq time.

Cooper Okay, I'll give you a little information further, radar wise. I was getting radar range, and radar rate intermittently on my digital there, and on my analog there. I don't know why it wasn't steady. On my needles I had steady lockon and was pointing them away on out and away on past.

Houston Cap Com Okay, did you get that intermittent R and R dot throughout the whole pass?

Cooper A little bit. Although ... fairly close we lock up pretty solid on the analog and hold fairly steady.

Houston Cap Com Okay, so in close it was steady, but at greater range it was intermittent.

Cooper Greater range it was a little bit intermittent although it did seem to jump in and out a little there.

Houston Cap Com Okay

Houston Cap Com Gemini V, Houston.

Cooper Go ahead Houston.

Houston Cap Com Your attitude control fuel usage has been up pretty high lately and we want to make you conscious of the fact that you are going to have to start taking it easy and going at a little lower rate than you have been to make it through the rest of the flight here.

Cooper Roger.

Houston Cap Com As a matter of a fact, I'll try to fix up a little summary for you and give it to you across the States the next time and let you know where you are.

Cooper Okay.

Houston Cap Com Gemini V, Houston here. Would you hit the start comp button one more time. We want to see, get some stuff on the ground here?

Conrad It's in Catch-up, you want it in Rendezvous?

Houston Cap Com It doesn't make any difference. Just go ahead and hit the start comp button.

Conrad Okay.

This is Gemini Control Houston. I think we're out of voice contact with the spacecraft now as it starts swinging across the Atlantic. We are on the 48th revolution. A revolution that started at the precise time at 10:47 central standard time. We have the tape wrapped up on the earlier portion of this pass beginning at Hawaii and we will play it for you at this time.

...

...

Conrad Blood pressure coming down.

Conrad Blood pressure coming down.

Hawaii Surgeon Gemini V, Hawaii Surgeon.

Hawaii Surgeon Gemini V, Hawaii Surgeon, full scale.

Hawaii Surgeon We have a good blood pressure. Standing by for your water report.

Conrad Roger. It's still the same as I think it was this morning. 16 pounds 4 ounces, and the meal, I still haven't eaten anything since the last meal. This was 3 charlie, I think.

Hawaii Surgeon Okay, real fine. Are either you are the Command

Pilot having any problem with the temperature now.

Are you fairly comfortable?

Conrad Oh yeah. We're fine now.

Hawaii Surgeon Okay, have either you or Gordon been doing any shivering on the last few revs, or any exercises. We've noticed, just checking on your respirations here, there are a few swiggels on it and we were trying to figure out why that was happening.

Cooper We were probably shivering, you know this last rev or two ...

Hawaii Surgeon Were you shivering on the last rev or two?

Cooper The last one rev has been good, but on the several before that we were probably shivering.

Hawaii Surgeon Roger. Everything else all right up there?

Cooper Say again?

Hawaii Surgeon Everything else all right up there.

Cooper Just fine.

Conrad The Pilot's working up a big appetite, I can tell you that.

Hawaii Surgeon Ha. Real good.

Hawaii Surgeon All right, I've got nothing else, Hawaii Surgeon out.

Cooper Okay.

Hawaii Cap Com This is Hawaii Cap Com. For your experiment 423A, there is a small cloud deck that extends from 700 up to 1100 it's west to southwest, about 2 miles east of the site.

Cooper Roger, we're ready.

Gemini Control Houston here. That concludes the Hawaii Pass. We've got the beginning of the State side tape wrapped up for you, and we will play it for you now.

Houston Cap Com Gemini V, Gemini V. Houston here.

Cooper Go ahead Houston. Gemini V here.

Houston Cap Com Roger. The cloud deck over the site now is solid, it goes to broken about 5 miles to the southwest of the sight and it goes clear about 2.miles to the east of the sight.

Cooper Roger. We can see the cloud deck.

Houston Cap Com Okay, very good. And they are go there.

Cooper Roger. We are in position and waiting.

Houston Cap Com Roger.

Conrad Boy, I wish we could get on it this Questar lens is fantastic.

Houston Cap Com Roger!!

Cooper If we don't get this this time, will you stand outside and wave so we can get your picture as we go by?

Houston Cap Com Say again. Oh Rog.

Cooper If we don't get this you can stand outside and wave and we will get your picture as we go by.

Houston Cap Com Okay, I'll be out there.

Houston Cap Com 10, 1, MARK. There we go. It's on it's way.

Conrad I see it there! See it Gordo. See it through
that holes in the cloud. There he goes, bigger
then heck.

Conrad See him, there he is over the water Jim.

Houston Cap Com Second stage.

Conrad. Okay, we can see him real good.

Houston Cap Com Very good, very good.

Conrad We can still see his climb very, very clearly down
there. Even against the cloud background.

Houston Cap Com Okay.

Conrad Houston call when you want the computer on.

Houston Cap Com Yeah, tell us when you get through there and we'll ..

Cooper We're through.

Houston Cap Com You're all done? Okay, we'll go back to this other
stuff now.

Cooper I can see him going above us.

Houston Cap Com You say he is going above you, right?

Cooper Right, we saw him way out going high to the right.

Houston Cap Com Okay, roger. The computer power up time is
03 16 45 00 and you can power it before then by a
couple of minutes if you'd like.

Cooper Okay, we were hoping to find something down here for the
D-6.

Houston Cap Com Just a second and I'll run outside.

Cooper

Okay.

This is Gemini Control Houston, 75 hours 3 minutes into the mission, with a little bit of additional information on that Minuteman launch. Apparently the best estimate now is the point of closest approach was about 115 statute miles. The spacecraft and the missile would have -- the missile would have arced up and over, of course, it was slightly to the north of the spacecraft. How many miles to the north, we can't get an exact fix on, it would probably be on the order of 100 miles. The -- at last report, the Minuteman was observed rising and well above the spacecraft, which at that point it would have been, oh, 135 to 140 statute miles in altitude coming into a perigee, or just about perigee which was actually 124, I believe. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control, 75 hours, 32 minutes into the flight. We're on the 48th revolution, the spacecraft coming up on a Canarvon acquisition. First of all, we have some information on the second stage of the Gemini 5 launch vehicle. According to our sources, the second stage impacted somewhere in the Indian Ocean within the past hour. It was observed at the start of its re-entry by an observer in Pretoria, South Africa, at 10:36 Central Standard Time. He observed the start of the break up. He estimated the altitude at about 110 kilometers. The report was that the second stage broke into 4 or 5 pieces, and they were presumed to have impacted somewhere in the mid to east Indian Ocean, about 10 to 15 minutes later. Just how much it impacted, we don't know. We got no reports on, if in fact any pieces got through the re-entry heat. Some additional information on the minute-man launch--the flight was completely successful, it was a 27-minute duration flight, it impacted at a point in the west Pacific, more than 5 thousand miles, nautical miles, from Vandenburg Air Force Base, it reached a maximum altitude of slightly more than 500 nautical miles. The minute-man was flying a path of 155 statute miles north of the path of the spacecraft. The point of closest approach between the two was 201 statute miles and that time of closest approach was 10:38:06 CST. The missile was launched at 1037:28 CST. The spacecraft was four minutes away from perigee at the time of the closest approach which would have put its altitude during the time of the sighting and the acquisition and the picture taking at an altitude of 125 statute miles. At this time we have a brief conversation between the spacecraft and the station at Ascension Island during its recent swing across the Atlantic and we'll play that tape for you now:

CapCom Gemini V, Gemini V, Houston here, over.

Cooper Go ahead Houston, Gemini V

CapCom Roger, we're taking a quick look at the fuel here and it looks like you're a little bit below the programmed flight plan fuel level for this particular time in the flight so we're gonna have to take it easy for a while.

Cooper Roger

CapCom We're getting some more information on the SAD 13 pass across Larado, right now the weather is clear with a few little puffy clouds around, less than a tenth. You're gonna have a smoke pod on the northwest corner again, the smoke is drifting slowly out to the northwest. You should be a little bit to the south and the sun should be almost overhead. So it will be a lot better, the conditions will be a lot better than they were this morning.

Cooper Okey, fine.

CapCom Gemini V, Gemini V, Houston

Cooper Go ahead

CapCom Can you give us an onboard readout on what your propellant quantity is, please?

Cooper The proepllant quantity is reading 31 per cent, over.

Cap Com Roger, under 3 1 percent

Cooper 113 down on my recording chart

CapCom Okey, very good.

END OF TAPE

This is Gemini Control, 75 hours, 48 minutes into the mission. The Department of Defense experimenters concerned with the Minuteman launch from Vandenberg are extremely pleased here in the Control Center. They advised that the bird was launched on the second called for. They are very complimentary to the SAC crew that handled that launching. The spacecraft is on its swing up across the Pacific. We should be in touch from the Hawaii station in about five minutes. Meanwhile we have some tape conversations gathered from the Carnarvon pass ended about five minutes ago. We'll play it for you now.

Conrad Carnarvon, Gemini V, standing by for the updates.

Carnarvon Cap Com Roger. Is the PLA update?

Conrad Roger.

Carnarvon Cap Com Area 50-4 2053 56, 12 + 12, 18 + 17, Area 51-3 -
32, 12 40, 14 + 05, 19 + 13, Area 52-3 - 23 47,
51, 12 + 57, 18 + 18, Area 53-3 - 25, 22, 39,
12 + 10, 18 + 00, Area 54 Delta - 26, 17, 24,
19 + 56, 24 + 41. Did you copy?

Conrad Yeah, I understand the times on the last two,
is that 25, 26. Will you read the times on
53-3 and 54-0?

Carnarvon Cap Com Roger, DODRC, 53-1 is 25 hours, 22 minutes.

Conrad O. K. good show.

Carnarvon Cap Com Standby, there seems to be a question on this thing..... You have to tell me what it is.

Houston Flight Carnarvon, those times should be 01, 22, 39, 02, 17, 24 and the day on them is 04.

Carnarvon Cap Com Roger.

Conrad O. K. What were the last two 53-3,..... 01 hours?

Carnarvon Cap Com 22, 39 and 54-Delta is02, 17 + 24.

Conrad Copy.

Carnarvon Cap Com The weather's good in all areas.

Houston Flight Carnarvon, can you give us an onboard computer summary?

Carnarvon Cap Com Roger.

Conrad O. K. Would you advise Flight that we got everything done except the Venus photographs on the platform 02 test.

Houston Flight We copied.

Carnarvon Cap Com Roger.

Houston Flight We'd like to a contingency B summary please.

Carnarvon Cap Com Roger, Flight. Get set.

Houston Flight Carnarvon, Houston Flight.

Carnarvon Cap Com Flight, Carnarvon.

Houston Flight Would you c an LOS computer summary
 please?

Carnarvon Cap Com Roger.

Houston Flight Carnarvon, did you understand that we wanted
 a second and contingency B. summary?

Carnarvon Cap Com No. We'll get another one out.

END OF TAPE

This is Gemini Control Houston, 76 hours 2 minutes into the mission. Within the last minute the spacecraft has come in contact with the Hawaii ground station and the crew is going through a medical data pass. Let's see, I believe its being performed on Gordon Cooper. Let's tune in there live and see what's happening.

CapCom Ah, we have a good pressure, standing
by for your water report

Cooper Roger, I had 17 pounds 4 ounces of water
and still finishing up meal 3 Alpha.

Hawaii CapCom Say again please

Cooper Roger, I'm still eating up the remnants
of meal 3 Alpha before I have a new meal here
shortly.

Hawaii Cap Com Roger. We have nothing else, thank you, Gemini 5.
Hawaii Surgeon out.

Cooper Roger, thank you.

Back to Gemini Control here. Cooper's reference there, meal 3 Alpha, includes cocoa; salmon salad, something called a P-bar, toasted bread cubes, and ginger bread. This is a total calorie intake of 914 calories. After the exchange of medical data, we have had no further conversation on the line. We'll stand by and monitor it. We really don't expect any additional information to come up, but we'll come back live if it does. During the pass across the States, the crew once more will attempt to sight those eye charts north of Laredo. Let's go back to the spacecraft. Well, apparently they are talked out after that last pass, which was a very talkative one. Again across the States, we will try the vision test north of Laredo, and shortly after that we will purge both the

oxygen and the hydrogen side of the fuel cells, both sections. The computer will be up, the platform will be up, the rate gyros will be off. This is Gemini Control, Houston, out at 76 hours, 5 minutes into the mission.

END OF TAPE

This is Gemini Control Houston, 76 hours, 32 minutes into the mission. In the last pass across the states the crew was successful in picking up that eye target over north of Laredo. Pete Conrad read out markings in what he called the second row, the squares are aligned in three rows, four boxes to the square, 2,000 feet on a side. In the second row, he said the second and third squares were in a position number two, position number two is a slant from left to right, in other words, a slant that starts at about 45 degrees off the top of your scale and slanting into the left corner. He said they acquired the target a little bit late and he couldn't see any more than that but he definitely could see those two squares in the second row. Farther on in the pass there was discussion of the operation of the primary scanner onboard. The crew reports that it is apparently off about 15 degrees in pitch, discussed noting this early in earlier revolutions. They are apparently allowing for it, their secondary scanner seems to be right on the money. There was also some discussion of the computer and how it's operating. No information on just what, if we have a problem there, or if we do have a problem what it is. It is giving the crew some strange readouts and it's causing some questions to be asked here on the ground. There's no major concern here over the computer, we know it's operative and

we're just trying to figure out exactly what the status of it is. We have a tape across the states for you, it's rather long and we'll play it for you now.

Houston Flight Gemini 5, Gemini 5, Houston.

Cooper Go ahead Houston, Gemini 5.

Houston Flight I want to give you a little information on your SAD 13 that might help you acquire the target. Are you ready?

Cooper Roger go ahead.

Houston Flight. O. K. The smoke pod is still at the northwest corner of the area. It's about 1,000 feet from the nearest cleared square. The smoke is going just about due north and it's about five or 10 degrees wide in the, or the smoke column goes out about like that. There's some scattered cu (cumulus) about 50 miles to the east and there's some very small cu about 10 miles to the west. It's clear right over the target area. To the south, southeast there's a light cirrus stack and it's well to the south southeast, quite a ways out of the way.

Cooper Roger.

Houston Flight Gemini 5, Houston again. Be advised that you're going to be passing just about 75 miles ground range south of the area where the targets are.

Cooper Roger.

Houston Flight Texas go remote, California go local.

ConradGemini 5, we have the smoke in sight at this time we're still quite a distance out.

Houston Flight O. K. Now the smoke is supposedly blowing due north from the northwest of the site.

Conrad Rog, do our best.

Houston Flight O. K.

Cooper The target is in sight.

Houston Flight Roger

Conrad O. K. We saw the targets and we think we logged about two of them and that's about it.

Houston Flight O. K. Can you tell me what they were?

Conrad Well, let me think about what direction we are first.

Houston Flight O. K. It wasn't the big E huh?

Conrad No. I think the third one in the second row was a two. We think that the second one was a two and the third was a two. That's about it. We were past it before we picked it up good.

Houston Flight O. K. So you think the second and third one in the second row were both twos?

Conrad That's right.

Houston Flight Very good. We have some other information here for you when you're ready to go.

Conrad Go ahead.

Houston Flight We would like to have you start your purge now, and purge both sections. When you complete your purge, we'd like you have you then power down.

Conrad O. K. I think we'll..... it tonight.

Houston Flight Roger.

Conrad We have a piece of information for you. We're pretty sure our primary scanner is off. It works all right except it measures a large platform with the nose about 15 degrees down.

Houston Flight O. K. Do you think the primary scanner is off about 15 degrees in pitch. Is that right?

Conrad Yeah. The secondary scanner works fine.

Houston Flight O. K. Listen would you start the purge because we don't have any telemetry out of Antigua and we'd like to watch this purge.

Conrad hydrogen off.....down.

Houston Flight O. K.

Conrad Hydrogen complete on number one.

Houston Flight O. K.

Conrad Number two hydrogen's complete. Starting number one oxygen.

Houston Flight Roger. While you're doing the purge here I'd like to ask Gordo a couple of questions about the needles during the lift-off in the powered portion of the flight. The question is which one of the tank needles went full scale during powered flight and what times did this occur?

Cooper Roger, it was before staging and it was the emps fuel needle, second stage.

Houston Flight Roger, second stage, emps fuel needle not the oxidizer.

Cooper Then it came back in after staging and then went off shortly thereafter.

Houston Flight Shortly after staging?

Conrad Affirmative.

Houston Flight O. K. Very good.

Cooper told you about the POGO?

Houston Flight Roger.

Conrad Station one oxygen purge complete. Mark.

Houston Flight Roger, thank you.

Conrad Starting 62 purge at this time.

Houston Flight Gemini 5, Houston again. When did you first
notice that the primary scanner was giving
this 15 degrees pitch down?

Cooper It was yesterday when it was being really
erratic. Clouds werequite
easily and at every sun set and sun rise it
would go off.....(garbled)..... signals.
.....(garbled) It was doing better yesterday.
Today we tried the primary just to compare it
and it is very weak and is holding the attitude
slightly nose down.

Houston Flight O. K.

Cooper (garble).... it has quite a.....
to it's attitude hold.

Houston Flight O. K. How about in the platform align.
Does it align the platform properly?

Cooper Well, fairly well. It's still
a little bit off, I think over a long
..... it would be aligned all right but
secondary does real.

Houston Flight O. K. Gemini 5, would you go to catch up
and hit the start com button? On your com-
puter please?

Conrad Roger,(garble) getting com
start now. Section two purge complete.

Houston Flight All right, your section two purge is com-
plete.

Conrad Holler when you want us to power down.

Houston Flight O. K. We're checking a few things on the
computer. If we loose voice contact before
we get this done we want you to power down
and go and start your rest cycle. We're
going to start the rest cycle about half an
hour late today so we want you to regulate your
sleeping by shifting everything a half hour
backwards. We'd also like to have you put
your cyrogenic guaging switch to the off
position now.

Conrad The computer's in the catch-up now and we
hit the strike comp (computation) and four
amp IVI's are cycling through from zero to
999.

Houston Flight O. K. We'll look into that for you.

Conrad We had this problem at the start of the REP
But I thought it was me and I got it to stop
the first day but it slipped my mind now.....

Houston Flight O. K. Understand it's still going back and
forth.

Conrad Yeah, it's going from 0 to 99. (garble)...

Houston Flight O. K. It's coming up all the time is that
correct?

Conrad Up all the time.

Houston Flight O. K.

Conrad Now it's stopped at 794 and.....

Houston Flight O. K.

Cooper 794½, 250

END OF TAPE

This is Gemini Control, Houston; 77 hours, 10 minutes into the mission. We're on the 49th revolution around the earth, out over the Indian Ocean, on a long, quiet swing up across the East Indies, and we should be in contact with from our Hawaii station, although it will be a peripheral contact, in perhaps 20 to 25 minutes. One of the more optimistic signs having to do with this mission has just flashed up on the board. I refer to the start of the ground elapse time to retro command for an end-of-mission period. Our clock has been activated and has the setting in it. It reads, right now, 114 hours and 54 minutes and 15 seconds to retro command--that would be for a full 8-day mission. The clock just above it is set and is counting backwards for a retro command that would bring us down into the 62 - 1 area, which is our present point of commitment. This is Gemini Control.

END OF TAPE

This is Gemini Control, 77 hours 32 minutes into the flight. The spacecraft out over the Mid-Pacific at a long quiet period here and one of relative inactivity, we presume aboard. Pete Conrad should be taking a nap and the Command Pilot, according to the Flight Plan should be eating another meal at this time. We expect acquisition within a very few minutes at our Hawaii station, then we will know a little bit more about what is going on at that point. This is Gemini Control out.

END OF TAPE

Gemini Control here; 77 hours, 44 minutes into the mission. We have an ever-so-brief conversation with the Hawaii station, Gordo's rogering that everything's quiet, slow onboard, and sounding just a wee bit tired after the day's activities. We have the tape ready for you, and we'll play it now.

Hawaii Cap Com Gemini, 5. Hawaii Cap Com. All your systems look good. We've nothing for you at this time. We're standing by.

Cooper Roger. Everything's quiet and slow up here.

Hawaii Cap Com Roger.

END OF TAPE

This is Gemini Control, 78 hours 2 minutes into the flight. Just a very few minutes ago, at precisely 1:58:39 central standard time, we began the 50th revolution as we crossed the 80th parallel. During the spacecraft swing down the West Coast of North America, we had a long conversation, largely between Jim McDivitt and Gordon Cooper. McDivitt passed along a long series of flight plan updates and there was considerable discussion of the Laredo eye chart experiment. The crew was questioned for any suggestions they might have in placement of the smoke pods that are -- that have been lighted out there to assist the crew in finding those charts, and among other items, the Gemini V crew was told to look on the 51st revolution for an active volcano to provide background for one of their infrared experiments. The volcano is in Hawaii. It's called Kilauea. I'll spell it, K-i-l-a-u-e-a. It's at 19 degrees 24 minutes north, 155 degrees 17 minutes west. We also want to acknowledge receipt of a telegram from a scouting group in convention at Albuquerque. The message to Gordon Cooper reads as follows: -

"326 Scouting Executives from the Southwest states of Oklahoma, Texas, and New Mexico, in conference at Albuquerque send greetings and best wishes for a successful flight to their friend and former scout, Gordon Cooper of Shawnee, Oklahoma. The message will be held for Gordon at the conclusion of the flight. We have now the tape wrapped up from the last pass across the West Coast of North America and we will play it for you now.

Houston Cap Com Gemini V, Gemini V, this is Houston, over.

Cooper Go ahead Houston, Gemini V.

Houston Cap Com Roger. I have a couple of questions and -- in fact a lot of questions, and a flight plan update. Are you ready?

Houston Cap Com First, a question. Did you see any accelerometer malfunction lights on your IMU during that last radar test over the Cape?

Cooper No.

Houston Cap Com No mal lights. Okay. I've got a flight plan update for you. Are you ready to copy it. It's quite long?

Cooper Yeah, go ahead.

Houston Cap Com Okay. S-7, time is 03 21 20 08, sequence number is 03, remarks, pitch down 90 degrees. Apollo land mark time 03 21 38 02, sequence 213, remarks, pitchdown 30 degrees, yaw right 6 degrees. D-4, 7, time 03 22 48 17, sequence numbers 425 alpha, and 416. Remarks, pitchdown 30 degrees, yaw right 30 degrees, volcanos. HF test, time 03 22 55 00, sequence number is 01, end time is 04 00 25 00. S-8, D-13, time 04 02 30 00 sequence number 01 and 02, under remarks, Pilot. S-7, time 04 03 20 25, sequence number is 01, remarks pitch down 90 degrees.

Cooper Okay.

Houston Cap Com S-8, D-13, time 04 03 30 00, sequence numbers 01, 02, remarks, Command Pilot. HF test time 04 04 00 00 sequence number is 02, remarks, end time is 04 05 30 00, and that is the end of the flight plan update. Are there any questions?

Houston Cap Com Gemini V, Houston, did you get the flight plan?

Cooper Gemini V.

Houston Cap Com Gemini V, this is Houston here.

Cooper Roger, you just started on the HF test, you faded.

Houston Cap Com Okay, I'll repeat the HF test. The time is 04 04 00 02. I say again, that was a mistake. The time is 04 04 00 00. The sequence number is 02, remarks, end time is 04 05 30 00. Gemini V, that's a completion of your flight plan update. Are there any questions?

Cooper I didn't get the remarks on that last HF test.

Houston Cap Com Roger, under remarks, the end time for the test is 04 05 30 00.

Cooper Okay, I got that.

Houston Cap Com Okay, fine. We've got some questions on the SAD 13 Gordo?

Cooper Okay.

Houston Cap Com These come from the experimenter and they say that they had the smoke generator and the chevron were both situated at the northwest corner, and their question

is, was there any problem in locating the pattern at the end of the smoke columns, and if so, do you have any suggestions for improving the position of the smoke column?

Cooper

I remember we just had trouble locating the patterns as we got in close in there. There -- I guess we were just coming in from such a different angle then we had seen it before.

Houston Cap Com

Okay, but you think the smoke column was placed at a reasonably good position though, is that correct?

Cooper

The smoke column really points out maybe 100 miles, maybe 100 and, oh probably, at a slant range of 200 to 250 miles easily.

Houston Cap Com

Okay, fine. They have another question here. Did you see any marks in, or did you see marks in every square or just in the two that read off to me?

Cooper

I could see marks in several of the squares. I didn't see them in every square, but I just didn't have a time when we were coming at such an angle, just the one that's all that just about that registered. And apparently that's about all that registered with Pete, was one particular square Pete saw clearly. I say we didn't get it located until we had already passed it.

Houston Cap Com

Roger. I have a comment here that says that the four largest targets were in the northern row. I guess they just want to point out that to you again

that they keep the largest targets in the northern most line.

Cooper Yeah, well the one that I could see the clearest, that registered on me, was the first target in the second row, which was the nearest to us when we went over.

Houston Cap Com Oh.

Cooper Real close to the targets like we did the first pass when I saw them earlier.

Houston Cap Com Okay, so you say that the one you saw the best was the first one in the second row?

Cooper Roger. But I think again this is where the problem is, like we had discovered in flying up there over them I'd say it was the light angle on the target itself.

Houston Cap Com Okay, now was the light angle better on the second pass today, or the first pass; as far as you were concerned?

Cooper I think it was better this second pass.

Houston Cap Com Okay. According to our calculations, the sun was pretty much over it for the second pass, but you have to look into the sun for your first pass. We assume that the light was better on the second one.

Cooper We both thought it was the second.

END OF TAPE

This is Gemini Control. We are at 78 hours and 34 minutes into our mission. The flight of spacecraft Gemini V, which at the present time is in it's 50 revolution over the earth and is just passing over the Tananarive tracking station on it's way into the Indian Ocean area. At the present time here in the Mission Control Center, we are in the midst of the shift change, the second shift of flight controllers or the flight team, replacing the first shift red team and very shortly our number 1 Flight Director, Christopher C. Kraft, and a few of his flight controllers will be at the NASA News Room for their regular noon time or shortly after noon time press briefing. As soon as this press briefing is completed, here at the Mission Control Center, we expect to have a flight and network status report ready for you. This is Gemini Control at 78 hours and 35 minutes into the mission.

END OF TAPE

This is Gemini Control at 79 hours and 2 minutes into the flight of Gemini spacecraft number 5. Our spacecraft at the present time is on its 50th revolution over the earth. It is passing over the Pacific Ocean and has just left voice range with the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean. At this time we will give you the taped voice transmission of the Spacecraft Gemini 5 flight crew as they passed over the Coastal Sentry Quebec, and we now give you this voice transmission.

CSQ Cap Com Gemini 5, Gemini 5, CSQ.

Conrad Roger, go ahead, CSQ.

CSQ Cap Com Roger, we would like to know what setting you have on your suit coolant control.

Conrad Roger. It's all the way closed.

CSQ Cap Com Understand. It all the way closed.

Conrad Roger.

CSQ Cap Com OK. We have you go on the ground, and if you have an experiment status report ready this rev - we'll copy. If not, we'll copy it next rev. Over.

Conrad OK. We'll catch you next rev on it.

CSQ Cap Com Very good. We have nothing further and are standing by.

Conrad Stand by, thank you.

END OF TAPE

This is Gemini Control at 79 hours and 32 minutes into the flight of Spacecraft Gemini 5, which is now on its 50th revolution and is approaching the west coast of Africa, and will within a very few moments be starting its 51st revolution over the earth. A while back as the spacecraft passed over the Coastal Sentry Quebec, we played back to you a voice tape taken over that tracking ship. This tape, however, did not include a late comment from the Coastal Sentry Quebec spacecraft communicator. In talking to command pilot Gordon Cooper he did say, "Gordo, we saw on this last pass." And Gordo's reply was, "Great! Did it look very bright in the sunlight?" And the answer was, "Affirmative. It was bright." After that, the spacecraft passed over the Hawaiian tracking station and we had another voice communication with command pilot Gordon Cooper, and at this time we will play you that taped voice communication between the Hawaiian tracking station and Gemini 5.

Hawaii Cap Com Gemini 5, Hawaii Cap Com.. All systems are green.
We're copying your dump. We have an onboard map
up-date for you.

Cooper Roger. Go ahead.

Hawaii Cap Com Roger. The title is map 221502, longitude 71 east,
rev 51. The star is the same time under remarks,
011012.

Cooper OK, fine. Thank you.

Hawaii Cap Com Roger.

Cooper Hawaii, Gemini 5. Could you give us the g.m.t.
time hack, please?

Hawaii Cap Com Roger. I'll give you a hack at 211400.

This is Gemini Control at 80 hours and 2 minutes into the flight of spacecraft Gemini V which is now on its 51st revolution over the earth and is approaching the southern tip of the African Continent. At this time in the Mission Control Center, we still do not have our updated status report. Flight Director Eugene Kranz is in the process of accumulating all the up to date data that he will need in order to give the crew an updated report on how the flight looks from the ground. On the next pass over the Rose Knot Victor, our tracking ship off the West Coast of Peru, we will have also from the astronauts a report on experiments that they have accomplished during the last 24 hours, and at that time we will give you a rundown on this experiment report. This is Gemini Control at 80 hours and 3 minutes into the flight mission.

END OF TAPE

This is Gemini Control, at 80 hours and 32 minutes into the flight of spacecraft Gemini V which is now on its 51st revolution over the earth and is passing over the Coastal Sentry Quebec, our tracking ship located in the Pacific south of the Japanese Islands. We have a report from our Flight Surgeon, Dr. Dwayne Catterson, he said that, thus far, the crew sounds fine and appears to be in very good physical condition, and that is from the data being received here on the ground. The Command Pilot has had an average of 5 hours of sleep a day for the first 3 days, the Pilot, Pete Conrad, $6\frac{1}{2}$ hours average. The water intake of both men is very closely following the national average, which is 6 pounds of water per man per day. We have not, as yet, had an opportunity to update the spacecraft from the ground which is the usual procedure and we are waiting a good pass over one of the tracking stations and at that time our Flight Director, Eugene Kranz, will give them an update on all the spacecraft systems as they look from the ground. This is Gemini Control at 80 hours and 33 minutes into the flight.

END OF TAPE

Conrad The islands look real clear today. We can see Honolulu
real well. Can see Kilo down here on Hawaii.

Hawaii Cap Com You sound like a tourist.

Conrad Boy, it's really a nice day down there isn't it?

Hawaii Cap Com I wouldn't know. I never get a chance to get out.

Conrad Me neither.

Hawaii Cap Com Touche.

END OF TAPE

This is Gemini Control at 81 hours and 32 minutes into the flight of Spacecraft Gemini 5, which is now on its fifty-second revolution over the earth and is just approaching the southern tip of Africa. About ten minutes ago, as the spacecraft passed over the Rose Knot Victor, our tracking ship off the west coast of Peru, Pilot Pete Conrad, on instructions on a time mark from the Rose Knot Victor's spacecraft communicator, purged his fuel cells; and this was successfully completed. He was advised that there will be a medical data pass by the pilot over Hawaii which will be coming up shortly, and he also reported that Command Pilot Gordon Cooper is asleep at this time. This is Gemini Control.

END OF TAPE

This is Gemini Control at 82 hours and 2 minutes into the mission of spacecraft Gemini V which is now on its 52nd revolution over the earth and is coming up over the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean, somewhat south of Japan. This has been a very quiet flight since 2:00 p.m. when the white shift team of controllers came aboard. We have upcoming a medical data pass from the pilot Pete Conrad who is awake and this will take place over the Hawaiian tracking station about 10 minutes from now. At this time also command pilot Gordon Cooper is asleep. Here in the Mission Control Center we were just visited by our flight director no. 1, Christopher Columbus Kraft, who came in and spent a few minutes talking to his relief flight director, Gene Kranz, now on duty in control of this flight. From the mannerisms and actions of Chris as he chatted with Kranz, obviously he is very pleased at the way this flight is going. This is Gemini Control.

END OF TAPE

This is Gemini Control at 82 hours and 32 minutes into our flight of the Gemini 5 spacecraft which is now on its 52nd revolution over the earth and is passing over the mid-Pacific on its way toward the Rose Knot Victor tracking ship located off the west coast of South America. We are told by our flight director, Gene Kranz, that approximately 40 pounds of oams fuel is required to complete the remainder of the 8 day flight plan based on present calculations. Flight director Kranz states there is sufficient fuel aboard to accomplish all the planned experiments and complete the mission. We also have a report from our recovery run that the U. S. S. McKenzie, a destroyer assigned to the recovery forces in the west Pacific landing area, reports sighting the Gemini 5 spacecraft for approximately 15 minutes during the 49th revolution. The time of sighting was from 1935 hours to 1950 hours Greenwich Mean Time. The ship reported that the Gemini 5 spacecraft was traveling in a northeasterly direction at a fast speed and it had the magnitude of a planet. Here in Mission Control Center our flight controllers are taking their evening coffee breaks, and some of them are getting ready for their evening meals. We will now play back for you the taped voice conversation between Gemini spacecraft 5 and our Hawaiian tracking station made just a few minutes ago. This is Gemini Control.

Hawaii Cap Com The people back in Houston would like a little information on your sleep and on Gordo's sleep. Did he go to sleep right after our last Hawaii pass?

Conrad He's sort of been cat-napping. He had a good long - really he had about an hour's long sleep period very deep on this last orbit.

Hawaii Cap Com Is he asleep right now?

Conrad Yep.

Hawaii Cap Com Allright. And how long was your nap?

Conrad I slept about an hour and a half.

Hawaii Cap Com One and a half hour's pretty good sleep?

Conrad Yeah, I don't remember anything.

Hawaii Cap Com Okay. Fine. Hawaii station out.

Conrad Okay, Hawaii surgeon. Let me give you a status on these meals. We finally got them straightened out. I just ate meal 3B at 220000.

Hawaii Cap Com That's 3B at 220000.

Conrad Now we've used up all the 3 day meals; we've used up all the 2 day meals; and we ate the 2 packages that were in the footwell. And we have all the first day's meals plus all the food in the left stowage box to go.

Hawaii Cap Com Okay. Now I copy that you used up all the 3 day meals, all of 2 day meals, 2 packages in the footwell, and you still have to go all the first day's meal and all the food in the left stowage box. That right?

Conrad That's right.

END OF TAPE

This is Gemini Control at 83 hours and 2 minutes into our mission. Spacecraft Gemini 5 is now passing over the south Atlantic coming up on the east coast of Africa. This is Gemini Control voice testing 1 2 3 4 5 - 5 4 3 2 1 Gemini Control testing. This is Gemini Control. We are now 83 hours and 5 minutes into the flight of spacecraft Gemini 5 which has just recently started its 53rd revolution over the earth and at the present time is approaching the east coast of Africa. About 10 minutes ago while the spacecraft was over the Rose Knot Victor, our tracking ship located off the west coast of Peru, pilot Pete Conrad was engaged in a series of experiments measuring radiation and making photographs of various objects in space and on the ground. Command pilot Gordon Cooper is still in his sleep period. After completing the experiments, Pete Conrad is scheduled to eat another meal. Everything in our flight appears to be normal and we expect that we will have an updated medical report during our next voice broadcast. This is Gemini Control.

END OF TAPE

This is Gemini Control at 84 hours and 4 minutes into the flight of spacecraft Gemini V, which is now on its 53rd revolution over the earth and has just passed over the Canton Island tracking station. In voice conversation with the Canton Island station, the voice of our spacecraft communicator Buzz Aldrin here in Mission Control Center was remoted. Pilot Pete Conrad discussed several of the experiments that have been carried on during the past 6 hours. He gave a food report which has our surgeons quite elated. It was a good food report. We will get some additional details on that later. He was also asked how his beard feels after 4 days in space without shaving and his comment was very short. He said, "Oh, not so bad." At the present time the spacecraft is moving southward and shortly will pass just south of the Rose Knot Victor, our tracking ship located off the west of Peru, and we are not sure at this time whether they will get within voice range of that station. This is Gemini Control at 84 minutes -- 84 hours and 5 minutes into the flight.

END OF TAPE

This is Gemini Control. We are now 84 hours and 32 minutes into the flight mission of spacecraft Gemini V which is now on its 54th revolution over the earth, having started that revolution a few minutes ago. At the present time the spacecraft has moved off the east coast of Africa in the south Atlantic and is -- the east coast of South America in the south Atlantic and is moving toward the African continent. Everything aboard the spacecraft appears to be a go condition at this time. The pilots have reported that -- pilot Pete Conrad has reported that they have no discomforts aboard. Our flight surgeon says everything on this flight appears to be first-rate at this time. We are in a very slack period of flight. There is very little activity. We do have a medical pass coming up over the Coastal Sentry Quebec in approximately 40 minutes and we have some very routine tests, division tests, that are also scheduled to be handled shortly. At this time the spacecraft is apparently going to be updated. We will have a briefing of the spacecraft crew. We have not yet come to that briefing period, and when we do we will be able to give you a good status report on the flight at that moment. This is Gemini Control at 84 hours and 33 minutes into the mission of Gemini V.

END OF TAPE

This is Gemini Control at 84 hours and 45 minutes into the mission of spacecraft Gemini V, which is now on its 54th revolution and has just approached the east coast of Africa. We have a food, water, and sleep report from our flight surgeon, Dr. Duane Catterson. He said the astronauts have been eating their meals regularly and are not at all behind on the food intake. He said their water intake is adequate and very close to the predicted levels made before this flight. He said the sleep was adequate. He reported that both astronauts are in good physical shape and are in condition to keep up with this mission. The medical equipment onboard, he said, is all in good working order and the pilots have reported that they are comfortable. Astronaut Gordon Cooper with 84 hours and 46 minutes of space flight on this trip has now rolled up more hours in space than any other human being. He had accumulated 34 hours and 20 minutes during his flight in the Faith 7 Mercury spacecraft in 1963. His total now is about 119 hours and 7 minutes. This is Gemini Control.

END OF TAPE

This is Gemini Control at 84 hours and 45 minutes into the flight of spacecraft Gemini V, which is now on its 54th revolution over the earth and is approaching the east coast of Africa. We have a medical report at this time from our flight surgeon, Dr. Duane Catterson. He reports that the astronauts' food intake is very good. They have been eating meals regularly and are not at all behind on food intake. He reports their water consumption is adequate and close to predicted levels. He said, also, sleep is adequate. He concluded by saying they are in good physical shape and are in condition to keep up this mission. The medical equipment aboard is all in good working order and the pilots report they are comfortable. Astronaut Gordon Cooper, with 84 hours and 46 minutes of space flight on this trip has now rolled up more hours in space than any other human being. He had accumulated 34 hours and 20 minutes during his flight in the Faith 7 Mercury spacecraft in 1963. His total now, spaceflight hours, is more than 119 hours and 7 minutes. This is Gemini Control

END OF TAPE

This is Gemini Control. We are at 85 hours and 2 minutes into the flight of spacecraft Gemini V, which is now passing over the continent of Asia. At this time command pilot Gordon Cooper will have a rather busy period while his partner, pilot Pete Conrad, will soon have a sleep period. Scheduled upcoming over the Coastal Sentry Quebec, our tracking ship located off the coast of the ocean south of Japan, actually off the Asian coast south of Japan, we will have a medical data pass and then command pilot Cooper will perform a purge of the fuel cells and he then will engage in some vision tests designated as 8. This is the ability to detect and recognize ground objects. Pilot Pete Conrad, as we said, is due to start his sleep period. In addition, command pilot Gordon Cooper is due to have another meal. There are several other tests that will be slated and we will give you the details on them as they are performed. This is Gemini Control at 85 hours and 3 minutes into the mission. All seems to be going well and our flight controllers are beginning to awaken a little bit from their coffee and lunch breaks here in the Control Center, and with these tests slated aboard the spacecraft, activity here is picking up a little. This is Gemini Control.

END OF TAPE

This is Gemini Control at 85 hours and 32 minutes into the flight of spacecraft Gemini V, which is now on its 54th revolution over the earth, passing over the Canton Island tracking station in the mid-Pacific. At the present time our spacecraft communicator here in Mission Control Center, Buzz Aldrin, remoting his voice through the Canton Island tracking station, is updating the flight plan for the benefit of command pilot Gordon Cooper. We should have a report on that updated plan with our next transmission. About 10 minutes ago, as the spacecraft passed over the Coastal Sentry Quebec, that station, or that tracking ship, passed on to the spacecraft V flight crew a Go from the ground station. At that time also, they took a medical pass type 1 on the command pilot. That consists of a temperature, a blood pressure, a 30-minute exercise period by the pilot, followed by a second blood pressure reading. Cooper gave a report on his water consumption since the start of this flight and said he has had 20 pounds and 8 ounces of water. He also passed on to Coastal Sentry Quebec some of the results of vision tests that he had made. At that time the Coastal Sentry Quebec also updated the spacecraft star map and Cooper ended the conversation reporting that everything is fine in spacecraft Gemini V. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are at 86 hours and 2 minutes into the flight of spacecraft Gemini V which has just about a few minutes ago started its 55th revolution over the earth. At the present time it is passing over central South America. During a voice conversation with the Rose Knot Victor, our tracking ship located off the west coast of Peru, some instructions were passed to the spacecraft crew relating to maneuvers to be performed in the next coming revolutions. One of these maneuvers will be a pitch-up maneuver which is somewhat reminiscent of the old Immelmann maneuver performed by aircraft. The purpose of this maneuver is for terminal maneuvers during reentry that will be coming in the Gemini program and it enables the pilot to position their spacecraft with a pitch-up maneuver to keep the various stars in view which will orient them on their reentry attempt. This is Gemini Control. Here in the control room we are getting some visitors. Happen to be the blue team of flight controllers who are filtering in and we are about ready for another shift change here, and we are estimating a press briefing at approximately 11:30 p.m. in the Gemini News Center with flight director Gene Kranz, Dr. Duane Catterson, Henry Stephenson, our Guidance and Navigation Control Officer, and Buzz Aldrin, astronaut Buzz Aldrin, our spacecraft communicator. This is Gemini Control at 86 hours and 3 minutes into the flight of Gemini V.

END OF TAPE

This is Gemini Control at 86 hours and 32 minutes into the flight of spacecraft Gemini V which is now on its 55th revolution over the earth and is now passing over the continent of Asia. According to our flight plan we will soon make contact with the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean and at that time our command pilot Gordon Cooper will conduct a cabin lighting survey. This is a measurement of light that filters into the spacecraft in -- he will check the lighting -- the lighting that filters into the spacecraft in various portions of the spacecraft. He will use a photometer to do this lighting survey. At this time our pilot, Pete Conrad, is asleep. Here in Mission Control in Houston, the NASA Mission Control Center, our flight controllers are concluding the briefing of the blue team of flight controllers which will take over direction of this flight at 11:00 p.m., central standard time. At this time the spacecraft, its pilots, and Mission Control are all going well. This is Gemini Control.

END OF TAPE

This is Gemini Control, 87 hours and 2 minutes after lift-off. Gemini V, now at the start of its -- running toward the end, I should say, of its 55th revolution, is now over the south-central Pacific, and nearing acquisition by the tracking ship Rose Knot, which will occur some 23 minutes from now. Here in Mission Control, the blue team of flight controllers led by flight director John Hodge, is settling down for the early morning owl shift, usually a rather quiet uneventful period when station contacts are infrequent and there is little air-to-ground transmission. This is Gemini Control.

END OF TAPE

This is Gemini Control, 88 hours 32 minutes after lift-off. Gemini V, now midway through its 50th revolution, is crossing over the northeast coast of Australia in the southwest Pacific, and will be acquired by the tracking ship Rose Knot in 27 minutes. There are no special flight plan activities or medical data checks to be run during the pass over the Rose Knot. Pilot Conrad presumably is still asleep at this time. This is Gemini Control.

END OF TAPE

This is Gemini Control, 89 hours and 2 minutes after lift-off. Gemini V is now in acquisition by the tracking ship Rose Knot off the coast of Peru. In 19 minutes the Canary Island tracking station should acquire the spacecraft. This is the first station contact since the Canary Island pass early in this, the 56th revolution. Gemini V was Go on the ground at Canary station. This is Gemini Control.

END OF TAPE

This is Gemini Control, 89 hours 32 minutes after lift-off. Gemini V is now over the Mediterranean shore, North Africa, one-fourth of the way into the 57th revolution. The spacecraft looked good on telemetry readouts aboard the tracking ship Rose Knot toward the end of the 56th revolution. Since this was the last pass by Gemini V over the Rose Knot for several revolutions, flight director John Hodge released the flight controllers aboard the ship for the night after the spacecraft communicator reported loss of signal. During the recent pass over the Canary Island station, command pilot Cooper passed down to the Canary spacecraft communicator the onboard readouts of the fuel cell reactant supply system, namely, oxygen 90 percent, quantity remaining at 110 pounds per square inch, and hydrogen 70 percent, quantity remaining at 770 pounds per square inch. A delayed-time telemetry tape was also played back by Cooper to the Canary station. The next station to contact Gemini V will be the Carnarvon station 27 minutes from now. This is Gemini Control.

END OF TAPE

This is Gemini Control 90 hours and 2 minutes after lift-off. Gemini V is now crossing the northwest coast of Australia midway through the 57th revolution. The Carnarvon station and the low-elevation angle on the spacecraft during this pass, something like 1.8 degrees, and the pass lasted only 2 minutes and 6 seconds. However, no attempt was made by the Carnarvon station to contact Gemini V spacecraft. This is Gemini Control.

END OF TAPE

This is Gemini Control, 90 hours 32 minutes after lift-off. Gemini V, now nearing the end of the 57th revolution, is now crossing the equator just west of Guayaquil, Ecuador. There has been no contact with Gemini V since the Canary Islands pass earlier in this revolution. Here in Mission Control it is rather quiet since at this stage in the mission, actually every 24 hours the orbits tend to shift away from the belt of tracking stations around the world, so that there are only one or two stations in each revolution. Coming up on the next Canary Islands pass the crew will be given updates for planned landing areas for revolutions 60 through 64. This is Gemini Control.

END OF TAPE

This is Gemini Control 91 hours and 2 minutes after liftoff. Gemini 5 is now passing to the eastward of the Canary Island tracking station. Pilot Conrad is scheduled to be awakened and briefed by Cooper when they come to the Carnarvon station in Australia. The pilot will then eat and command pilot will take a cap nap about the time Gemini reaches Carnarvon. Canary spacecraft communicator Keith Kundel passed up to Gemini 5 updates for planned landing areas in the 60th through the 64th revolution. Canary's report said Gemini 5 is go on the ground. This is Gemini Control.

END OF TAPE

This is Gemini Control 91 hours 32 minutes after liftoff. Gemini 5 spacecraft any moment now will be acquired by tracking station at Carnarvon, Australia. Carnarvon is scheduled according to the flight plan here on the projection screen in Mission Control to update Gemini 5 flight plan items for the day following. That is, for the rest of today. Command pilot Cooper is scheduled to take a nap. Pilot Conrad is scheduled to have one of the - I guess - probably meal B, for day 3, following this pass. This is Gemini Control.

END OF TAPE

This is Gemini Control, 92 hours and 2 minutes after lift-off. Gemini V spacecraft presently is over the central Pacific coming up across Mexico in the next few minutes. We have now the listing of some of the experiments that were updated to the spacecraft from the Carnarvon station. I'll run through these as briefly as possible. There are approximately 4 runs of the surface photography experiment in which 4 photos will be made of each object. The first one is at 5:55 central time, the next is 6:08 central time, the next at 6:24, the next at 9:04 central time, and the last one at 10:51 central time. The visual acuity experiment will be run over Laredo at 7:23 this morning. The radiometric measurement -- infrared measurements, that is, will be run at 7:15 with a reading taken of the star Sigma Sagittarius, otherwise called At 7:56 a radiometric measurement will be made of a sled run at the Holloman Test Range near White Sands, New Mexico. Cloud top spectrometer measurements will be made of thunder storms over southern Florida at 10:37 a.m., central standard time. Following this group of experiments, along with other operational checks that are included in the flight plan update, the spacecraft will be powered down at approximately 11:00 a.m., central standard time. We have now a tape of the air-to-ground transmissions between the Carnarvon station and Gemini V spacecraft. Let's hear that tape now.

Carnarvon Cap Com Gemini V, Carnarvon Cap Com.

Conrad Go ahead Carnarvon.

Carnarvon Cap Com Roger. We got a long flight plan update for you.

Conrad Ready to copy you.

Carnarvon Cap Com platform. By the way, all of these are to put update. 11 00 00. Remarks, power up. Item 2, platform, 11 25 00. Remarks, aline SEF. Next item, power up 11 40 00. Remarks, rate gyros and computer on. Next item, bio-med recorders 11 51 00. Remarks, number 2 on number 1 off. Next item, D-6, delta 6, 11 55 55, sequence number 134, mode number 08. Remarks, pitch down 30, yaw 0, speed 60. Next item, D-6, delta 6, 12 08 13, sequence number 067, mode number 08. Remarks, pitch down 30, yaw . . 11, speed 125. How we going so far?

Conrad Got it.

Carnarvon Cap Com OK. Next, delta 6, 12 24 02, sequence 091 mode number 08. Pitch down 30, yaw right 2, speed 60. Next item, platform 13 00 00. Remarks, aline SEF. Next item, S-8, D-13, 13 23 39, sequence no. 03. Remarks, pitch down 30, yaw right 22. Next item; D-6, delta 6,

13 58 50, sequence no. 089, mode no. 19, pitch
down 30, yaw right 1, speed 1000. S-4, S dot 4
How's it going?

Conrad

Got it.

Carnarvon Cap Com

OK, next item. D-4 D-7, 14 15 00, sequence no.

410 Charlie. Next item, platform 14 30 00.

Remarks, aline SEF. Next item D-4 D-7, 14 56 50,
sequence no. 4 24 alpha, mode no. 08, pitch down
30, yaw left 10, speed 60, test time 14 57 31.

Next item, D-6, delta 6, 15 04 40, sequence

no. 134, mode no. 08. Remarks, pitch down 30

yaw 0, speed 125. Next item D-4 D-7, 15 19 00,

sequence no. 419. You got everything up to this
point?

Conrad

Yeap.

Carnarvon Cap Com

OK, we'll

and make it about one more in.

Platform 15 40 00, Remarks, aline SEF. Next item,

D-4 D-7, 16 28 04, sequence 423 Baker, mode

no. 08. Remarks, pitch down 29, yaw left 34,
speed 60. Do you copy?

Conrad

. have it all.

Carnarvon Cap Com

OK, there's 2 -- 3 more items. I'll give you this
one, S-7, 16 37 00, pitch down 90, thunder storms
over southern Florida. You copy?

END OF TAPE

This is Gemini Control 92 hours 32 minutes after liftoff. Gemini 5 is now in acquisition by the Canary Island tracking station during the state side pass just completed over the eastern test range stations. Pilot Conrad reported that the fuel cell hydrogen supply was at 68 percent quantity, and the pressure was holding at 770, 770, pounds per square inch. These are onboard readings. He reported also that his comfort was fine, that the temperature in the cabin was very fine. We have a tape of this state side pass which we'll roll right now.

Houston Cap Com Gemini 5, Gemini 5, Houston Cap Com. Over.

Conrad Hello, Houston, Gemini 5 here.

Houston Cap Com Roger. You look pretty good here on the ground. Are you ready to finish copying the flight plan updates?

Conrad Would you wait just one second. Be right with you.

Houston Cap Com Okay.

Conrad Houston, ready to copy.

Houston Cap Com Roger, I'll pick up where Carnarvon left off, but I may repeat part of the last one. It was S7 at 163700, pitch 90 down, thunderstorms over southern Florida. D6 165125, sequence number 065, mode number 08, pitch 30 down, yaw 32 right, speed 60, power down 170000; rate gyros, computer, and platform off. Did you copy?

Conrad Roger.

Houston Cap Com Okay, did you have a chance to try the second rendezvous illumination test, or did you cancel those out altogether tonight?

Conrad

Let me explain a little bit what our problem was.

After we left the states yesterday we had quite a bit of housekeeping to do, and by the time we got done restowing things, why it was getting pretty late.

Then we got into the HF check and that kept Gordo awake. And then we got into a bunch of things

like that and the next thing we knew neither one of us got any sleep to speak of so we ran out of gas there and we just knocked off everything trying to get some rest.

Cap Com

Ok. That's fine. No problems. I just wondered if you'd tried the second one. We may reschedule but we may not. It depends on the fuel. And do you have any particular questions on the procedures or would you like to look it over for a little longer?

Conrad

Well, later on today why don't you run - well, you can run it by - why don't you run it by me right now and I'll make sure I got it all right.

Cap Com

Ok. We got some other things we'd rather talk to you right now about, particularly since we've still got 24 at least until we try this one again, so we'll update you a little later on that particular test. Ok?

Conrad

Very good.

Cap Com

Did you get a chance when you put the REP out to take any pictures of it?

Conrad

Yeah, I should have it on 16mm and we should have it on

the Hasselblad, and when we put it out we had both the REP and the blanket right together.

Cap Com Ok. Understand. Thank you. Ok, I have a map update for you if you're ready to copy.

Conrad Ok.

Cap Com Ok. The map at the time of 4 days, 11 hours, 38 minutes, 57 seconds, will be 134.6 degrees west.

Conrad Rog. Would you give me the rev and the time again please.

Cap Com Rog. Rev is 59, and the time is the fourth day, 11 38 57.

Conrad Very good. Got it.

Cap Com Ok. And your fuel usage is getting sort-of close. We figure we need about 44 pounds to finish all of the experiments and we have about 45 pounds. So be conservative on that. Ok?

Conrad Yeah. We've been drifting most of the time here in the evening.

Cap Com Ok. That's fine. We find that even during the slow passes when you're not doing anything that you use about two pounds or so. So we'd like to keep it down as much as possible.

Conrad Ok.

Cap Com Ok. Elliott has a discussion on your radar yesterday for you.

Conrad Ok.

See Could you give me a fuel cell hydrogen quantity reading first, Pete?

Conrad Ok, it's 68 percent and 770.

See Roger. They did a considerable computer analysis work yesterday, and I'd like to ask you a couple of questions and then I'll tell you what we're going to do. Did you get any analog range indication when you were trying the last radar test.

Conrad Yeah. Gordo said he had range rate and I guess the range scale was packed.

See Roger. And did you try when you were having the problem of reading the range out, did you try going to standby and then back to on.

Conrad No.

See Ok. You probably didn't think about that 'cause you had a lock on light. Ok. The MDIU appears to be ok by ground analysis. They've checked out the various readings and it appears that it's working all right. For your information, your first 69 readout any time will be the last previous readout in the rendezvous mode so it Ok. The range readout problem, we think may be due to noise interference from either Jacksonville radar or SPADETS. We plan to have them off the next time we try this. We would like to have - to do another radar test - not today but tomorrow - it'll probably be similar to the one you did yesterday. We'll have to forward information on that to you. We will also include - we'd like you to include taking Questar pictures of the Cape. Now do you feel you can do this both at the

same time. I have indication that you did something like that yesterday, anyway.

Conrad That's correct. We got some pictures of the Cape yesterday. With the Questar during the trend.

See Ok. Well, we would like you to do that again when we do the test and the pictures will be taken when you're directly on boresight and I was concerned about whether you could operate the MDIU and the Questar at the same time.

Conrad Yep.

See Ok. Do you have any other questions about the radar test?

Conrad Nope

See Okeydoke.

Conrad We would like to request that we keep everything to a minimum in the evenings. We, for some reason, are having trouble in sleeping. One guy bothers the other when he's doing anything, is what it amounts to.

See Ok. This would be - this test would be done during the day so I don't think there will be any problem that way.

Conrad We're not concerned about that. We just want to emphasize that it's so darned quiet in the cabin and when one guy is trying to sleep, the other guy does anything, why, it makes quite a bit of noise.

See Roger.

Cap Com Pete, how about if we plan these last, say, five or six

hours before you got the Carnarvan updates as a quiet period? Would that work out for you pretty good?

Conrad Yeah. That's awful late and that's what finally happened. We both fell asleep last night, I guess. or I know I did.

Cap Com Ok. We'll keep it down then. Can you give us a status - on your temperature up there, or your comfort?

Conrad Our comfort's fine and the temperature is fine. I think my M-1 experiement's quit running for good now. I don't know whether it ran out of air, or what. The problem that I had with it before is not the same thing. The valves not making any noise any more. So I think it either ran out of air or just gave up the ghost and quit running.

Cap Com Ok. Fine, Understand.

See You guys are sounding better all the time, Pete. You must like it up there.

Conrad Say again.

See I said you guys are sounding better all the time - you must like it up there.

Conrad Well, we're getting used to it.

See Ok

Flight Gemini 5, this is Houston Flight. Good morning.

Conrad Morning. How are you?

Flight Great. Looks like we're getting ready for another day here. We'll be giving you a Go pretty soon.

Conrad Ok. We're standing by to power up.

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Flight Roger. We'll see you.

END OF TAPE

This is Gemini Control 92 hours and 2 minutes after liftoff. We have some fairly late data on the orbital measurements of Gemini 5 flight from some fairly recent tracking data over the eastern test range stations and Canary Islands. The orbit as it now it has a 123.7 statute mile perigee, 189.5 statute mile apogee, and from the time of the tracking measurements it will have a life-time of 14.8 days. The next tracking station to acquire Gemini 5 will be the Carnarvon station in approximately 3 minutes. This is Gemini Control.

END OF TAPE

This is Gemini Control 93 hours 32 minutes after liftoff. Gemini 5 spacecraft presently is over the mid-south Pacific toward the end of the 59th revolution. The next tracking station which will acquire Gemini 5 will be the Guaymas station starting a long string of passes over the eastern test range and the state side stations. The first fairly full pass of the morning. This will occur in approximately 13 seconds - 13 minutes from now. We have a tape recording of the air to ground transmission between the Carnarvon tracking station and Gemini 5 spacecraft a few moments ago and this revolution. Let's listen to that tape now.

Carnarvon Cap Com Okay, I'll give you a mark at 11 hours, 10 minutes
 in about 40 seconds. 10 seconds to go. 4 3 2 1
 mark. 1110.

Conrad Roger. Got it. Thank you.

Carnarvon Cap Com Gemini 5, we have visual contact.

Conrad Very good. We're tumbling right now. We ought to
 be flashing at you.

Carnarvon Cap Com Roger. They report that they're having a little
 trouble staying on with the Segon beacon, at tumble.

Conrad Next time we come over we'll be in the marsh again.

Carnarvon Cap Com Roger. All systems look go on the ground, flight.

Houston Flight Roger. Understand he's powering up. Is that right?

Carnarvon Cap Com Say that again, flight.

Houston Flight We have an indication of power up from your summary
 on the platform.

Carnarvon Cap Com That's roger. He reported platform powered up at 11 00 00.

Houston Flight Very good.

Houston Cap Com Had a delay, Carnarvon Cap Com, wait on this call.

Carnarvon Cap Com We have acquisition.

Carnarvon Cap Com We've got a minute to LOS.

Conrad Gemini V, Roger.

Carnarvon Cap Com Flight, the fuel cell O₂ temperature heat exchanger has risen 14 degrees AOS.

Houston Flight Roger. The heat exchanger outer temperature, that shouldn't go up with pressure, that should go down. Okay, you mean the coolant loop is getting hotter. Yeah, okay.

Carnarvon Cap Com We've got LOS.

Houston Flight Roger Carnarvon. How did everything look?

Carnarvon Cap Com Looks real good.

Houston Cap Com Carnarvon, AFD.

Carnarvon Cap Com AFD, Carnarvon.

Houston Cap Com Okay, would you recap the first part of your pass. The voice was down and we couldn't hear you when you were on air to ground, Chuck.

Carnarvon Cap Com Okay, the first part of the pass was the medical pass of the Pilot. He -- we got good blood pressures, water report was 19 pounds 6 ounces. He reports sleeping 4 hours last night, and I gave him a G.m.t. time hack and he reported that he powered up the

platform as per the flight plan update, and that's
about it.

Houston Cap Com Roger.

END OF TAPE

This is Gemini Control, 94 hours, 2 minutes after lift-off. Gemini 5 spacecraft presently is in the mid-Atlantic and will be acquired by the Canary Island tracking station in approximately 3 minutes. We have a brief tape of the last, just completed, State-side pass over the Eastern Test Range stations and the Guaymas, Mexico station. Let's hear that tape now.

Houston Cap Com Gemini 5, Houston Cap Com.

Conrad Go ahead, Houston, Gemini 5.

Houston Cap Com Roger. Would you place your OAMS heater circuit breaker to open for ten seconds, please, and then close.

Conrad It's working. We can see the amps on the gauge.

Houston Cap Com Oh, OK. We wanted to check it down here, too.
How about your quantity read to ECS O₂ please.

Conrad Say again.

Houston Cap Com Your quantity read to ECS O₂.

Conrad We noticed that the OAMS was reading awful cold.

Houston Cap Com Roger. Did you have any luck with the M-1 when you re-cycled the valve?

Conrad That's negative. I'm afraid it's just flat quit running. Nothing's making any noise anymore.

Houston Cap Com OK, fine. Good try anyway. Could we have a food report from the pilot, please?

Conrad Roger. My last meal was 1-A at 040000.

Houston Cap Com Roger. Understand. Could we have it for the last 24 hours, please? We didn't get it at Canarvon.

Conrad

3-D at 03220000.

Houston Cap Com

Roger. You can turn the ECS O₂ quantity read back,
and I have some information on the carrier for
your D-6. It will be heading 255 degrees, there
will be one destroyer one mile astern.

END OF TAPE

This is Gemini Control, 94 hours 32 minutes after lift-off. Gemini V is presently in the 60th revolution, just passed the Tananarive voice remoting station off the Coast of Africa. The next station which will be in acquisition of Gemini V will be the Carnarvon, Australia tracking station in approximately 8 minutes. This is Gemini Control.

END OF TAPE

Good morning, this is Gemini Control; 95 hours, 2 minutes into the mission. In a recent pass, the command pilot gave us the following medical information: He told us that he had completed meal 3 Charlie, and this was on day 3, yesterday. He had completed meal 3 Charlie, 3 Alpha, and 3 Bravo. He reported for day 4 he had completed meal 1 Alpha. He said his total water intake up to his current revolution had been 20 pounds, 3 ounces. He also reported he just finished 7 good hours of sleep. Capsule communicator Jim McDivitt will attempt to raise Gemini 5 in the next minute or so via the Canton Island station. He plans to tell him to cancel out the Laredo eye chart experiment for this pass across the United States, the reason--bad weather in the Laredo area. The weather this morning from the U. S. Weather Bureau's space flight meteorology group says that weather conditions remain very good for continuing the orbital operations of Gemini 5 for another 2 days, and probably longer. In the west Atlantic landing area, between Florida and Bermuda, skies are partly cloudy with ceilings unlimited most of the time. Winds are less than 10 knots, and waves are not more than 3 feet. Conditions will not change significantly during the next 24 hours. In the east Atlantic area, about 300 miles west of the Canary Islands, skies will be partly cloudy with ceilings around 2000 feet at times. Normal trade winds of about 15 knots and waves of 4 to 5 feet are forecast for early Thursday. In the mid-Pacific area about 500 miles north of Honolulu, skies will be partly cloudy with ceilings of 1500 to 2000 feet and widely scattered showers. Winds will average a little over 15 knots and waves, about 5 feet. In the west Pacific area, about 500 miles southwest of Tokyo, weather conditions

will deteriorate a little as a cold front moves near the north part of the recovery area, so that ceilings will lower to about 1000 feet at times, while rain restricts visibility to about 6 miles, but the south half of that area will continue to have fine weather. Winds through out that area will be only 10 knots and waves 2 to 3 feet. Tropical storm Doreen has taken a turn toward the northwest. It is now centered about 1200 miles southwest of San Diego, and an equal distance east of Hawaii. With continued northwest movement, it should weaken as do most these Pacific storms when they move over cooler water. Hurricane Anna in the central Atlantic is probably out of visual range of the Gemini astronauts. No unusual conditions are noted elsewhere around the world. We have the Canarvon tape ready to play for you, and we'll do so at this time.

Canarvon Cap Com Gemini 5, Canarvon. We have a valid oral temp on the command pilot. Request the pilot to start fuel cell purge. Stand by for Surgeon.

Canarvon Surgeon Gemini 5, Canarvon Surgeon. Standing by for your first blood pressure.

Conrad Roger.

Cooper Commencing hydrogen purge

Conrad On my mark.

Cooper Mark. Purge complete.

Conrad Starting now cell 2 hydrogen purge.

Cooper We just broke another oral ring on the blood pressure...

Canarvon Surgeon Roger. Let's go ahead with the exercise.

Conrad Roger.

Cooper O₂ purge on no. 1 started.

Canarvon Surgeon Roger.

Conrad Exercise started.

Cooper Give me a mark and one minute of purge.

Canarvon Surgeon Roger.

Conrad Exercise complete.

Canarvon Surgeon Roger. We'd like a food report now for the past 24 hours.

Conrad Roger.

Canarvon Surgeon We've had a.... O₂.

Conrad OK.

Cooper OK, food report--say you want all day 3, huh? On day 3 on command pilot I have 3 Charlie, 3 Abel, and 3 Bravo.

Canarvon Surgeon Understand. 3 Charlie, 3 Abel, and 3 Bravo.

Cooper That's right. On day 4, here I had one Alpha.

Canarvon Surgeon Roger. Water report?

Cooper Water report, at present I have drunk 20 pounds and 3 ounces of water.

Canarvon Surgeon Roger. Sleep report?

Cooper Sleep report, I have just finished about 7 hours of sleep.

Canarvon Surgeon Understand, 7 hours.

Cooper Affirmative.

Canarvon Cap Com Mark. Two minutes on O₂ purge.

Conrad Roger. Second one come in.

Houston Cap Com Canarvon Cap Com, Houston flight.

Canarvon Cap Com Flight, Canarvon.

Houston Cap Com Would query the crew as their need for the platform in doing the D-6 experiments?

Canarvon Cap Com OK. You want to know if they really need the platform for D-6.

Houston Cap Com How they feel about it, yes.

Canarvon Cap Com OK. Gemini 5, Canarvon and flight. We'd like to know if you feel you need the platform for the D-6 experiment.

Conrad I think so. I think it would make it a lot better if we could use it.

Canarvon Cap Com Roger. Say again flight.

Houston Cap Com That's all right. His answer was the one we wanted.

Cooper Hydrogen and O₂ purge complete on sections 1 and 2. Cross over off.

Canarvon Cap Com Roger. Surgeon would like to know about how long you had the oral temp pump in your mouth.

Cooper I guess for a couple of minutes.

Canarvon Cap Com Roger. Could you give us a read out of your ... quantity, pressure, and temp?

Cooper OK, the fuel gauge reads 26 percent, temperature is 61, and the pressure is 13 50.

Canarvon Cap Com Roger. Would you give us a quantity read on fuel cell O₂?

Cooper Want the onboard readings too?

Canarvon Cap Com Roger, fuel cell O₂ and H₂.

Cooper Roger. Fuel cell O₂ 90 percent, 120 psi. Hydrogen, 67 percent, 77.

Canarvon Cap Com Roger. We have nothing else. Standing by.

Cooper Everything's fine.

Canarvon Cap Com Flight, Canarvon. We got all this.

Houston Cap Com Roger.

Gemini Control here again, and while we get this brief Canton tape ready for you, we are happy to report that a bunch of bright-eyed Red Team flight controllers are on their stations, eager for a busy day. Now let's listen to this brief Canton Island pass.

Houston Cap Com Gemini 4, Gemini 4, Houston, over.

Canton Cap Com Gemini 4, Houston is calling you, Gemini 5.

Houston Cap Com Gemini 5, Gemini 5, this is Houston. Gemini 5, Gemini 5, Houston, over.

Cooper Go ahead, Houston. Gemini 5, here.

Houston Cap Com Gemini 5, Houston. Be advised that the weather for your SAD 13 is too bad, and we will have to scrub your SAD 13. We would like to replace it with a D-6.

Cooper Roger. We'll replace the SAD 13 with a D-6.

Houston Cap Com I have some D-6 information here for you, Gemini 5, for a selected target. Are you ready to copy?

Cooper OK. Ready.

Conrad Go ahead, Houston.

Houston Cap Com Roger, Gemini 5, Houston. Be advised that time will be 04132530, sequence 025, mode 19, remarks, pitch down 30, yaw left 8, speed 1 over 1000, F-stop is 4. Your weather is 2 to 3 tenths. Over.

Conrad Roger. 04132530, and 025, a one niner, pitch down 30, yaw left 8, 1 over 1000, and 4.

Houston Cap Com Roger. Good morning to you.

Conrad How are you this morning?

Houston Cap Com Just fine.

Conrad

Houston Cap Com Good.

Cooper Since you switched down, I have every piece of gear in the spacecraft out in my lap.

Houston Cap Com Very, very good. Sounds like old home week.

Cooper Well, it's like any other household chore.

Houston Cap Com Say again.

Cooper Well, it's like any other household chore.

Houston Cap Com Roger.

Gemini Control, here. That bright-eyed capsule communicator, of course, was Jim McDivitt, who slipped back into an earlier flight by calling for Gemini 4. However, he did recover and get the right call sign up there. This is Gemini Control out.

END OF TAPE

This is Gemini Control here, 95 hours 24 minutes. Within the last minute, the Gemini V crew has been passed a go for 77-1, I repeat, they have been given a go for 77-1. Earlier they were told to scrub the Laredo eye chart test this pass and they were given a substitute experiment, a D-6 photographic experiment. The site that they will be shooting on this experiment is England Air Force Base, England Air Force Base at Alexandria, Louisiana, over which they should be right now. This is Gemini Control.

END OF TAPE

This is Gemini Control Houston, 95 hours and 32 minutes. In this pass across the States, Jim McDivitt plays a message that went like this, "Trudy sends her congratulation," Trudy Cooper, of course, his wife on taking the longest time in space record for the United States, also that his two daughters, Cam and Jan, send their best. Gordo came back with a slow, but warm, "Thank you, and please thank them." Later he suggested, he said he had a message for Wally, and he suggested that he throw away the reticle, apparently he is not too happy with it's operation. The window reticle to assist in acquiring various targets on the ground. He suggests that a fine line grease pencil would be much better. At that point, Chris Kraft observed that Gordo sounds like his old self today. A comment based on the fact that he sounds pretty perky and Gordo did confirm that he sounds like his old self because of the basis of his 7 hours of sleep that he had had last night. The crew also received 3 second updates on several D-4, D-7 experiment which is to be performed over Carnarvon next time. They will take another IR sighting on the star, Muhl, and they will also perform a high resolution photographic experiment, a D-6 experiment in the area of Tananarive, on the Island of Madagascar. We've got the State side tape ready for you and we will play it for you now.

Guaymas Cap Com Gemini V, Guaymas Cap Com. Turn your TM control switch to the real time at ac-aid position.

Houston Flight Okay, thank you.

Houston Flight TM solid, Guaymas.

Guaymas Cap Com How are you doing up there?

Conrad Fine.

Guaymas Cap Com Okay, you're looking real good on the ground. We'll stand by if you need anything.

Conrad Roger, thank you.

Guaymas Cap Com Intermittent telemetry.

Guaymas Cap Com Very poor telemetry, unable to keep lock on at Guaymas.

Guaymas Cap Com Flight, Guaymas.

Houston Flight Go ahead Guaymas.

Guaymas Cap Com How about if we go back to Command. You are just about to get acquisition at Texas and let you command us on and see what happens.

Houston Flight Okay.

Guaymas Cap Com Gemini V, Guaymas Cap Com.

Conrad Go ahead Guaymas, Gemini V.

Guaymas Cap Com Put your TM control switch back to the command position.

Conrad Okay.

Guaymas Cap Com Flight, Guaymas. We now have good TM again.

Houston Flight Roger.

Houston Cap Com Gemini V, Houston. We have some information for you. I know you are preparing for the D-6, and I'll just read it off to you. You have a go for 77-1 and you will receive some DCS updates during this pass across the States for 62-1, so you'll see your DCS light coming on and going off.

Cooper Okay, fine.

Conrad We're go up here. Do you want the onboard readouts.

Houston Cap Com Yeah, when you get around to it. I think you are getting ready for that D-6.

Conrad Okay, I'll give them to you right now. 1A is $8\frac{1}{2}$, 1B is 8.0, 1C is 9.5, 2A is 7, 2B is 6.9, 2C is $8\frac{1}{2}$, and the main bus voltage is 26.0.

Houston Cap Com Roger.

Conrad RCS A is 72 ... RCS B is 68 290, secondary O₂, 54, on the left, 5300 on the right.

Houston Cap Com Roger.

Conrad Say, are you sure this 025 is not under the clouds?

Houston Cap Com Well, there was supposed to be two to three tenths cloud coverage there. Cloud coverage.

Conrad Yeah, maybe in a hole.

Houston Cap Com Yeah, might be.

Conrad It's under the clouds. We'll see if we can find something else going across here.

Houston Cap Com Okay, very good. Listen, I've got some other information for you here. First of all, Gordo, you there? Where else, huh? Gordo, this is Houston, I have a message for you.

Cooper Okay. Go ahead.

Houston Cap Com Trudy says she would like to send her congratulations to you for now having the most time in space. She says that Cam and Jan are fine and that they are all proud of the progress that you and Pete are making, and I'd sort of like to add my congratulations to it also. I'm sure that the Flight Director would too.

Cooper Thank you, tell them all hello.

Houston Cap Com All righty.

Houston Cap Com I have some updates for you on some of your forth coming experiments, the times have changed slightly. If you are ready to copy -- when you are ready to copy, give me a holler here.

Conrad We're moving across the coastline. We are going to try to get one right in here some place.

Houston Cap Com Roger, I'll just stand by and you give me a holler when you are ready.

Cooper I'd like to add right now that I recommend to Wally that he throw this reticle away.

Houston Cap Com Okay, roger.

Cooper The reflecting mirror completely blinds you when you are working in any kind of sunlight.

Houston Cap Com Roger. I'll send him your message.

Cooper Right, I'd use grease pencil on the window.

Houston Cap Com That's a fine line grease pencil isn't it?

Cooper Right. If I had one with me, that's what I'd be using.

Houston Cap Com Okay.

Houston Cap Com Gordo, Chris says you sounds like your old self this morning.

Cooper Yeah, I finally got a good night's sleep.

Houston Cap Com Yeah, I got that, 7 hours. That's cheating.

Cooper Yeah, it sure is. I've sort of been saving up.

Houston Cap Com Rog.

Conrad Okay, I'm ready for the updates.

Houston Cap Com All righty. We have a -- you have an experiment at
14 56 50. This is a D-4, D-7 and the time now has
been changed to 14 56 53. Three seconds later.
Under the -- did you find that one Pete?

Conrad Yeah.

Houston Cap Com Okay. Under the remarks for that particular thing,
the test time has been changed from 14 57 ~~31~~ to
14 57 33.

Conrad Roger.

Houston Cap Com Okay, you have another D-4, D-7 and this one is at
16 28 04. The time on that has been changed to
16 28 07.

Conrad Roger.

Houston Cap Com Okay, now right after that particular experiment, there
is an S-7 and right after that is a D-6. You are really
going to be pressed for time in between the D-4 and the
D-6 with that S-7. So, try to work it through the
left-hand Pilot's window, so that you don't have to
dismantle all of your equipment. We realize that it's
a very time critical there.

Conrad Roger.

Houston Cap Com Gemini V, Houston here again. Did you get the O-ring
fixed in the blood pressure bottle.

Cooper Roger, we got the two new O-rings in.

Houston Cap Com Okay, very good. Have you used any of your blue bags
yet.

Cooper Have we what?

Houston Cap Com What's the blue bag status?

Cooper There is still just one.

Houston Cap Com Very good.

Conrad Just great.

Houston Cap Com Rog.

Houston Cap Com Gemini V, Houston again. We'd like to have you give us a go for your D-4, D-7 at 14 56 53 over Carnarvon if it's possible?

Conrad Roger Houston. Will do.

Houston Cap Com Okay.

Houston Cap Com Just think, you only have 96 hours 23 minutes and 54 seconds until retrofire time.

Conrad Listen, there was a momentous milestone to shift biomed recorders.

Houston Cap Com Roger. You're halfway there.

Conrad You're right.

Houston Cap Com Hey, is your beard getting itchy yet?

Cooper Yeah.

Houston Cap Com Did you take any curlers along to curl it?

Cooper No, but we should have.

Houston Cap Com You can always braid it and tie your mike up with it.

Cooper Right.

Cooper All the sensors are itching a lot worse than the beards.

Houston Cap Com Roger.

Houston Surgeon Gemini V, Gordo, this is the MCC Surgeon. Do you have any other skin reaction around the rest of the skin since we did this cleansing bit?

Cooper Pete's cuffs, M-1 cuffs are itching him an awful lot.

Houston Surgeon Okay, we'll talk some later, next rev, about those cuffs. Congrat's, you guys are doing great.

END OF TAPE

Gemini Control, Houston, here; 96 hours 28 minutes into the mission. Due to an apparent mechanical or personnel break down in the commercial television pool facilities, we are not able to play for you right now the Canary, Kano, or Tananarive passes. We are in discussions with the pool on why these passes were missed, and we do not have an explanation for you right now. We do have the Canarvon tape, however, and we'll play that. I want to emphasize, we'll rectify this situation as soon as possible, and we apologize because we cannot give you those earlier passes. We do have the Canarvon tape, and let's play it now.

Conrad Canarvon, Gemini 5.

Canarvon Cap Com Gemini 5, Canarvon.

Conrad Roger. We have a computer to keep the ... light out while we are tracking up here, and.....

Canarvon Cap Com That's all right, leave it there. Are you go for 77 - 1?

Conrad Roger, and we'll be go for D-4, D-7, 424 Alpha.

Canarvon Cap Com Roger.

Conrad We'll give you a call when we're tracking.

Canarvon Cap Com Roger. You're go on the ground for 77 - 1, I'll up-date your TR.

Conrad Thank you. Canarvon, Gemini 5.

Canarvon Cap Com Go ahead.

Conrad Are we just about over ahead of you now?

Canarvon Cap Com In about 30 seconds.

Conrad Roger. Got a good look at Perth.

Canarvon Cap Com Roger.

Conrad And we'll give you a call just the second tracking

starts.

Canarvon Cap Com

Roger.

Houston Cap Com

That's where he is--just about over the top of
Perth, not over Canarvon. You found that is
correct at MCC, Houston.

Canarvon Cap Com

Roger, flight. That time I gave you is the
..... approach, you're south of us.

Conrad.

Roger.

END OF TAPE

Gemini Control Houston here, 96 hours 51 minutes. In the last minute the spacecraft has been raised through the California station and we are going to bring you the State side pass. And in the pass, it will include a sled run at Holloman Air Force Base. The pilot's will have their IR sensors on it and they will try to track it across the ground. A little information developing here on the -- which may be of interest on the environmental control system oxygen. We're showing 81.7 percent as a quantity reading. The pressure is 1020 psi, and venting slightly. That system vents at approximately 1000 pounds. Fuel cell oxygen, we show a quantity of 89.5 percent, pressure 140. Fuel cell hydrogen, we have a quantity of 65.6 percent, pressure reading is 353 and venting slightly. That system vents at 350. Let's stand by now as we begin this pass across the States, the spacecraft just -- almost to the coast of Baja, California. Let's cut in live on it.

Cooper ... and he's making the coffee now.

Houston Cap Com Very good, were those scrambled or over?

Cooper Oh, over easy.

Houston Cap Com Okay. How is he as a cook?

Conrad He's a pretty good cook.

Houston Cap Com Is he, how's he as an eater?

Conrad But good! But good!

Houston Cap Com Roger.

Conrad Hey, we got Catalina and Sacramento out there, but it looks like San Diego and Los Angeles are covered in.

Houston Cap Com Roger. How's the weather out West? Is it pretty good?

Conrad Yeah, all across the country it is. The cloud deck is

right up, you know, from the Pacific right up to the Coast.

Houston Cap Com Right. How about in the Southeastern U.S. Is it pretty clear over there, or is it clouded over?

Cooper It's fairly cloudy over there. It looks like probably it will break up, it's not heavy clouds.

Houston Cap Com Okay, I've got some information for your D-6 on the carriers, as soon as you complete D-4, D-7.

Cooper Okay.

Cooper We're coming right in over the Gulf of California now.

Houston Cap Com Roger, our plotboard agrees with you.

Cooper Very good.

Conrad Okay, we've got White Sands in sight from here.

Houston Cap Com Okay, very good. I was just going to ask you to give me a call when you had it.

Conrad Yeah.

Houston Cap Com We're still going right along with the test on the ground.

Cooper Very good.

Houston Cap Com We're still go on the ground.

Cooper We're tracking now.

Houston Cap Com Okay, very good. We got about 23 seconds.

Houston Cap Com 15.

Cooper Roger, right on it.

Houston Cap Com Very good.

Houston Cap Com 2, 1, go.

Houston Cap Com Ignition.

Conrad sighted on the track.

Cooper There it goes. We see it.

Houston Cap Com Very good, very good. Burnout now.

Cooper We're tracking right on it.

Houston Cap Com Very good.

Houston Cap Com Are there any comments on that particular one?

Cooper Roger, we could see it very good and we were right on the money I think tracking that so.

Houston Cap Com Okay, how about the water breaking?

Cooper We could see something. I don't know whether it was water or smoke. It probably was water down at the end.

Houston Cap Com Okay, fine. Are you ready for this short briefing on your D-6.

Cooper Roger, go ahead.

Houston Cap Com Okay, the weather in the area is two-tenths to three-tenths cloud coverage and it is getting better and it's completely clear right over the carrier.

Cooper Roger, very good.

Houston Cap Com The carrier will be going in a very large circle with the DD about 1500 yards behind right in the wake, trying to make the wake so you can see it.

Conrad I hope we can find them this time. We've been looking for them enough times.

Houston Cap Com I thought an old Navy guy like you could find a carrier.

Conrad I had the wake yesterday, but then we lost it so that we couldn't track.

Houston Cap Com Roger.

Cooper The weather hasn't been too good over the water there.

Houston Cap Com I gather that from your comments yesterday. Today it looks like it should be pretty good there.

Cooper I hope so.

Conrad sun angle. (broken)

Houston Cap Com Okay.

Conrad Hey, could you get a reading for me for how many pictures they have on this 3401 film.

Houston Cap Com That's 3401?

Conrad That's right, I've taken quite a few pictures now and I'm afraid I might run out.

Houston Cap Com Okay.

Cooper Passing north of Lake Charles. New Orleans. We have the Cape in sight.

Houston Cap Com Very good. You got 70 frames, 7 zero frames on that 3401.

Conrad Okay. We've got plenty left.

Houston Cap Com Okay.

Gemini Control Here. The count on the OSO at the Cape is T-16 minutes and counting. The spacecraft will not attempt to track it. It will pass over it ahead of the planned launch time. Let's stand by for any additional conservation.

HoustonCCap Com Gemini V, Houston. Do you have your primary scanners on now?

Cooper Negative. We are on secondary.

Houston Cap Com Could you switch over to primary for a couple of minutes here. We'd like to get some data on them.

Cooper Pete, go to primary.

Cooper That's a good idea.

Houston Cap Com Say again please?

Cooper Say, that's a good idea. We've been wanting somebody to check that one.

Houston Cap Com Okay.

Cooper We have a few cloud problems.

Houston Cap Com Okay.

Cooper We'll give her a go here.

Houston Cap Com Say again.

Cooper I say, we'll give it a go.

Houston Cap Com Okay.

Conrad Dead ahead, 12 o'clock. I can see her turning bigger than heck.

Conrad We got her in sight this time.

Houston Cap Com Roger, I knew an old carrier pilot could find the Carrier.

Cooper Very good.

Conrad Okay, we got it this time.

Houston Cap Com Okay, well according to my figures here, you must

have just about over him when you saw it, was that right?

Conrad Let's see, I say we were about 50 degree pitch.

Cooper We got him a fair ways out.

Houston Cap Com Well, very good. Okay, you did get some pictures of him that time then?

Conrad Correct, 6 of them.

Houston Cap Com Very good.

Cooper This 35-mm camera is still jamming, incidentally. Pete's.. had about 4 jams now over the last couple of days on it, and I did too.

Houston Cap Com Okay, have you been able to clear the jam each time without any trouble?

Cooper] Well we manage to get it clear, but it still isn't all right.

Houston Cap Com Okay.

Houston Cap Com Gemini V, Houston here. If you are through with that experiment, it would be nice if you could come up to around 000 attitude or either BEF or SEF so that we could get some data off your scanner.

Cooper Okay, swinging it around to -- I'll be in SEF momentarily.

Houston Cap Com Okay.

Houston Cap Com Gemini V, Houston. Could you read what was on the Carrier?

Conrad I didn't -- I could see the carrier, but not that well. It took up, about, maybe, a tenth of the picture frame.

Houston Cap Com Okay, I think we are getting LOS.

Gemini Control here. We apparently either have had, or are about to have loss of signal out there. The count on the OSO at the Cape is T-8 minutes and counting. The reference to the carrier you heard Jim McDivitt commend Pete Conrad for the ability of an old carrier pilot to acquire, or find the ship. Here comes one more bit of conversation. Let's go back to it.

Conrad Go ahead Houston.

Houston Cap Com I just wondered if we still had voice contact with you. Did you ever get SEF or any level attitude?

Conrad We're coming there very slowly right now. We're just staying in Pulse, we don't want to use too much fuel.

Houston Cap Com Rog. Okay, if we don't get this in over this pass, when you are over one of the stations that has TM, it might be a good idea to sort of fly across it at 00 attitude, just so the horizon scanners are locked on so we can get about a minutes worth of data.

Conrad Okay, will do.

Cooper You should have gotten some data as we crossed the Coast of Florida, we were still 000 there.

Houston Cap Com Okay, very good.

Cooper Okay, we're approaching 000 now.

Houston Cap Com Okay, very good.

Gemini Control.here. That seems to have wrapped up the transmissions from the spacecraft. They are unusually clear today. The spacecraft is out almost to the 40th parallel and it was still in very sharp communication. back here with our Mission Control Center in Houston. You heard a reference to -- you heard Jim McDivitt commend Pete Conrad on his ability as an old carrier pilot to find the ship. By coincidence, the first time Pete Conrad saw that particular ship, the Lake Champlain, was back in June of 1955. Pete made his first carrier landing, his very first carrier landing, on the Lake Champlain, in June of 1955. About 4 days from now, I'm sure he will hope to make a very close approach to that same ship. We have the Hawaii tape which preceeded the State side pass wrapped up for you and we will play it for you now.

Hawaii Cap Com Gemini V, Hawaii Cap Com.

Cooper Go ahead Hawaii, Gemini V.

Hawaii Cap Com Roger, we've got you green. We'd like you to do a UHF type 6 over the States, we'd also like a 424 alpha go from you.

Cooper Roger, Gemini. 424 alpha go and I understand we are to do an UHF 6 over the States.

Hawaii Cap Com Roger.

Cooper Roger.

Houston Flight 424 alpha is also on scheduled and counting.

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Hawaii Cap Com Roger. 424 alpha is on schedule and counting.

Cooper Roger, very good.

Cooper We're on schedule too.

Hawaii Cap Com Roger.

Cooper And counting.

END OF TAPE

Gemini Control, Houston here; 97 hours, 15 minutes, and the count on the Thor-Delta vehicle at the Cape to launch OSO is 2 minutes, 2 minutes and counting. T-90 seconds on OSO. Spacecraft now coming up over the coast of Africa. It'll just miss the shoulder of Africa and swing down across the ocean. T-30 seconds and counting on OSO. 20 seconds. 5 seconds, 2, 1, 0, ignition. We've got a lift-off, and it looks nice at the Cape. Roll program's in, the pitch program is in. They tell us from that Cape that the roll looks very good and the burn entirely normal. I've got an unofficial lift-off time of 17 minutes after the hour. On OSO they are trying for a roughly 350 mile circular orbit, 600 pound satellite. Seventeen minutes after the hour was the beginning of the OSO window which extended to 3 minutes after the next hour, from 10:17 Cape time to 11:03 Eastern Standard Time. They'll try to get an azimuth on the OSO. Stand by one, please. We have second stage ignition on that Thor-Delta vehicle. We are advised the azimuth they are flying is 108 degrees, which would carry them just to the south, the south and above the Gemini spacecraft. Correction on the launch azimuth, 100 degrees, instead of 108. The Gemini vehicle, you recall, was launched in an azimuth of 72 degrees. Cape says it's entirely happy with the Delta performance. We are standing by for a word on the burn out. The Gemini crew, meanwhile, is running small end forward, and they are going through a series of platform alignment checks that are on board, guidance system. Their flight plan is free otherwise between now and Hawaii, when we have a medical data pass. Stand by. They have second stage burn out on the OSO, and now a short burn on the solid

third stage. T plus 5 minutes, 40 seconds into the mission, and everything looks fine on OSO. The second stage burn was entirely nominal, the Cape reports. We won't know until Canarvon whether the crew could observe OSO. It's entirely possible that they could have yawed around 180 degrees and tried to look for it. Gemini Control, here again. The Cape advises the Thor-Delta rocket boosting OSO is now in its long coast period between second stage burn out and third stage ignition. They're estimating third stage burn should occur shortly after ten minutes of elapsed time, and burn out very close to 10 minutes, 31 seconds elapsed time. We'll come back to you when we get confirmation on that burn out. This is Gemini Control out at 97 hours, 26 minutes into the Gemini 5 mission.

END OF TAPE

Gemini Control, here; 97 hours, 29 minutes into the mission. The Cape confirms that the third stage did spin up properly, did burn properly, and has cut off. They are considering OSO in orbit. We do not have any orbital numbers for you, but we should have them in a very few minutes.

This is Gemini Control.

END OF TAPE

Gemini Control Houston; 98 hours, 12 minutes. We have a brief Gemini-Canarvon conversation for you. Over the Canarvon station we had some operational communications difficulties. The conversation was very weak at the start, and then it dropped off to nothing. The voice control people are investigating, and I think have it fixed up. Our straight communications with the Canarvon station remain good, but something happened to the remoting arrangement through the Canarvon station where we lost power, and the voice signal was not completely audible, which requires to have the Canarvon station replay their tape on the ground back to us here in Houston. A period of relative quiet and relaxation after that busy State-side pass has gone on here now for the last 30 minutes. A number of flight controllers enjoying their 77 - 1 cigars which the flight directors passed out, and we're coming up on another State-side pass here very shortly. Hawaii should acquire within two to three minutes. We've got the Canarvon tape now, as brief as it is, and we'll play it for you now.

Canarvon Cap Com Gemini 5, Canarvon Cap Com.

Cooper , Gemini 5.

Canarvon Cap Com Roger. Be advised you have a medical pass on the pilot at Hawaii, their acquisition time is 16 hours, 15 minutes.

Cooper Roger. 16 15.

Canarvon Cap Com Roger and are you go for sequence 423 Baker?

Cooper Roger.....

Canarvon Cap Com

Cooper Station control said that I lined everything up
OO very carefully, set the primary scanner on, and

it pitched us down to about 30 to 35 degrees,.... the light came on, but it.....Every time that I applied, took it off the line...and started a slow rate upwards through the horizon, put the scanner back on, and it would stop the upward rate but would slowly start pitching us back down.to almost vertical.

That was the extent of the Canarvon situation. We have not yet acquired Hawaii; we'll come back to you when we do. You heard Gordon Cooper reference that primary scanner, apparently it's still a little bit out of phase, as we reported yesterday. On the eastern edge of this State-side pass, the crew will perform an S-7 experiment. This involves a spectrograph reading of the cloud tops, getting an infrared signature of the cloud tops, and also some associated photography. The experiment is one from the weather bureau, the principal experimenter is Doctor Faud Saidey. Doctor Saidey is a Syrian national, and he is working with our weather bureau on this experiment. This is Gemini Control.

END OF TAPE

This is Gemini Control Houston, 98 hours 27 minutes. The -- our orbital elements today are 123.5 statute miles perigee, our apogee, 189.2 miles, statute miles. The period of our revolution is 95.5 miles. During the recent Hawaii pass, Pete Conrad, reported he drank a total of 20 pounds 12 ounces of water. He reported he completed eating meal 1 Bravo and he said he had 6 hours of sleep last night. Spacecraft is coming up on the Coast of California at this time. And out at Vandenburg Air Force Base we have just had ignition at 28 minutes 16 seconds approximately out. Pete Conrad says they have got it in sight, a Minuteman lifting off from Vandenburg. Pete came back within a second or two of ignition and said, "We've got it now." Reports from the ground say it's looking good. They are tracking it right on course. We've had no comment from the spacecraft in the past minute, 50 seconds into the flight of the Minuteman. It's still going good. Second stage has ignited on time. Pete Conrad reported just before ignition that he could see an airplane in the area. Our Air Force observer reports that the missile is on time and on the line. T+180 seconds. Correction, T+120 seconds. Cooper reported very briefly that he was having a little trouble operating the spacecraft in the Pulse Mode, that is, keeping a precise track on it. Texas station has acquired the spacecraft. Jim McDivitt has just congratulated the crew on setting a new American record for time in flight. Very appropriate that Jim should do it. It broke his record. Let's cut in on that conversation live.

Houston Cap Com Gulp is one ounce?

Cooper That's right. We calibrated our gulps and our gulps are approximately 25 cc's, or approximately 1 ounce.

Houston Cap Com Okay, fine. And you are assuming that the amount of water you put in the food is what's called for on the bag, is that correct?

Cooper That's right.

Houston Cap Com Okay, well we need this pretty accurately because we are using it to check on the fuel cell outputs.

Cooper Okay.

Houston Cap Com Are these gulps any larger than what you are using on the ground, Gordo?

Conrad I think we are probably being underestimating slightly.

Houston Cap Com You think you are drinking a little more than you are estimating. Is that right?

Conrad I sort of think so.

Cooper I kind of think so. I think the gulps may be a little larger then they are on the ground.

Houston Cap Com Okay, because of the high pressure?

Cooper Affirmed.

Houston Cap Com Okay, we suspected that might be it. We just wanted to make sure.

Houston Cap Com When you do this S-7, we'd like to know in which direction you did it, and where abouts the particular clouds were with respect to Florida so we can get the airplane to take pictures of the same clouds?

Conrad Okay. We'll do it going in the orbital plane, I think it's the best, and we'll pitch down 90.

Houston Cap Com Okay, after you have taken the pictures, let us know

where it was and we will dispatch the aircraft to that particular spot.

Conrad

Okay.

Houston Cap Com

I'd also like to remind you that we want to purge both fuel cells before you power down and when you do power down, we'd like to have you turn your horizon scanners off also. We'd like to get in a pretty low power configuration.

Conrad

Okay.

Houston Cap Com

The weather for your next D-6 still looks pretty good.

Conrad

Okay.

Houston Cap Com

I might add here that you had some pretty good explanations on why your IVI's were driving in the windows yesterday, so I wouldn't worry about that any longer. I could give you the explanation if you are interested.

Cooper

Okay, we'll get it from you later.

Houston Cap Com

Okay.

Conrad

We're passing right over the top of you right now.

Houston Cap Com

Just a second and I'll run out.

Houston Cap Com

You know, we ought to put a glass ceiling in here so we could look up and see you.

Conrad

Yeah.

Houston Cap Com

How's the weather down here today?

Conrad

I see some thunderstorms back there.

Houston Cap Com

Roger.

Conrad There is a big one down there by Lake Charles.

This is Gemini Control here. There is a break in the conversation. Apparently the crew could see the Minuteman quite visibly. The lift-off time was 28 minutes and 7 seconds after the hour, but they have also apparently had some difficulty in actually tracking it and following it with their IR sensor. That is at least a quick surface indication. We may have some more discussion on that. The spacecraft right now is down over Florida.

Conrad Hey, Jim, the only thunderstorm in Florida are right at the very tip and we are just about to pass over them now. They are all the way down by Key West.

Houston Cap Com Okay, very good.

Houston Cap Com Gemini V, Houston.

Conrad Go ahead.

Houston Cap Com I was talking to Jane this morning Pete, and she said to tell you that everything is going along fine. She is having a nice time on the ground, and hopes you are having a nice time in the air.

Conrad Thank you very much.

Houston Cap Com Gemini V, Houston. We have another 3 or 4 minutes, we'll just stand by in case you've got anything.

Conrad Okay, we've got the thunderstorm pictures and we've just taken some more photographs of Cuba.

Houston Cap Com Okay.

Cooper Just scenic shots.

Houston Cap Com Gemini V, Houston. What is the thunderstorm situation across the Southern United States?

Conrad Well, there was some -- I didn't see them in the Western part because we were recovering from, we were turned around BEF and followed the California tracking, but just as we came over Galveston there, I saw one just north of Houston and then one about Lake Charles, and then it gets better. There were none in Florida until you got all the way down to Key West.

Houston Cap Com Roger. How are they out over the ocean. Are there any at all out there?

Conrad There's quite a few out here today.

Houston Cap Com Okay.

Houston Surgeon Gemini V, this is Houston Surgeon. Pete can you tell me something about this interference with sleep that you were reporting last night. Is this due to the fact that Gordo's activities are requiring him to move around in the spacecraft. Is it just the movement of the other guy?

Conrad The HF check where you're transmitting every five minutes for an hour and a half doesn't help you when you are sleeping.

Houston Surgeon Okay, you're hearing everything he says. Are you wearing the ear muffs?

Cooper ... helmet, but actually during the fuel cell purging where
both guys have to participate during one or the others
sleep periods.

Houston Surgeon Okay, so it's still scheduling as well as ...

Cooper I can't purge the fuel cells on my side, so I have to
wake Pete up to purge the fuel cell because I can't
reach the switches there. And I can't put out the
platform without crawling all over him with the
swizzle stick, and lighting the light on his side and
things like that that just cause a lot of interference.

Houston Surgeon Okay, fine Gordo. We'll try and do some talking down
here with Jerry and see if we can't wiggle this flight
plan around some.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead Houston, Gemini V.

Houston Cap Com What do you think about the HF check from the ground
to the spacecraft. Do you think that would bother
you. I don't imagine it would, would it.

Cooper No, that wouldn't bother.

Houston Cap Com Okay. I'll try to go over some of these things with
the flight planners before I leave today Gordo.

Cooper. Okay, I think they are just kind of loading down
some of those night periods with things that are
really preventing sleep pretty much.

Houston Cap Com Okay, I think I know what you mean about the swizzle
stick and getting the IGS power on and those kind of
things.

Cooper Rog.

Conrad Yeah, that old platform business last night kept us both going for a while.

Houston Cap Com What did you have to platform up for last night?

Conrad We never did get it up. We decided it against it, but talking to Houston about it last night, what they wanted us to do, we had 4 communications and one thing or another and that took up about an hour or so.

Houston Cap Com Oh, rog. I know what you are talking about. Okay.

Houston Flight We'll get that straightened out Pete.

Houston Cap Com We're working on that now Pete.

Conrad Okay.

Gemini Control here, during this lull we should explain the reference to the swizzle stick as Gordon Cooper called it. The -- this is a stick about 2 feet long. It's usable from either side of the spacecraft and has a little crook on the end of it, a little L shaped affair and it's used for flicking on and off the switches that are slightly out of reach. Let's stand by for any additional conversation. We're way down on the edge of the Antigua zone right now. The flight plan on down across the Atlantic calls for the crew to do another D-6 experiment over in the Ascension area. Let's stand by. I think we are out of range, but we'll make a check.

END OF TAPE

Gemini Control, here again. We're out of the acquisition range now. We do have the Hawaii tape which preceeded the State-side pass, and then we'll come back with the beginning of the State-side pass, which includes the McDivitt message to the crew. Let's roll the Hawaii tape now.

Hawaii Cap Com Gemini 5, Hawaii Cap Com. We copy your oral temp, you can start your blood pressure.

Conrad OK.

Hawaii Surgeon Gemini 5, this is Hawaii Surgeon. Is your cuff at full scale? Now we have a good blood pressure, give me a mark when you are going to begin your exercise.

Conrad Roger. Mark.

Hawaii Cap Com Systems are go, flight.

Houston Cap Com Roger, Hawaii.

Hawaii Surgeon Stand by, 5, Hawaii Surgeon. Full scaling you. Now we have good blood pressure. Standing by for your water and sleep report.

Conrad Roger, and I have drunk 20 pounds, 12 ounces; last meal was 1 Bravo and 04100000; and I got about 6 hours of sleep last night.

Hawaii Surgeon You had 6 hours of sleep last night?

Conrad Yes.

Hawaii Surgeon Roger. OK, fine, thank you, Gemini 5. Hawaii Surgeon out.

Hawaii Cap Com Gemini 5, Hawaii Cap Com.

Conrad Go ahead, Hawaii Cap Com.

Hawaii Cap Com Roger. We'd like to know your status for 423 Bravo.

Conrad We're go on 423 Bravo.

Hawaii Cap Com Roger. We'll continue the count, however there's high, cirrus clouds that may move into the area.

Conrad OK. Now would you place your OAMS heater switch to off.

Conrad Roger. OAMS heater switch is off.

Houston Cap Com Circuit breaker.

Hawaii Cap Com We're still counting on time.

Conrad OK.

Hawaii Cap Com Now we are copying FM FM plate.

Houston Cap Com Roger.

That concludes the Hawaii portion, and now we want to play for you the tape of the minute-man launch sequence. At the end of it is the McDivitt congratulatory message on beating his record, the total time in a Gemini spacecraft. Let's roll the west coast portion of that State-side pass now, please.

Houston Cap Com Gemini 5, Gemini 5, Houston. Over.

Conrad Go ahead, Houston, Gemini 5.

Houston Cap Com Roger. We're still going along fine on 423 Bravo. I'll give you a little weather report here. There's a low deck of scattered clouds at about 500 feet that extends down to the southwest, and its probably the stuff blowing in off the water. There's a high deck of broken Cirrus at about 35,000 feet,

but both of these decks are clearing off, though,
so there's at least a 50 percent chance of it
being clear.

Conrad

Roger. We're in position, ready to go.

Houston Cap Com

OK. We're still on schedule, though, Gemini 5.

Conrad

Roger. I can see an airplane to the south
of us down there contrailing just bigger than
heck.

Houston Cap Com

Roger. One minute.

Conrad

Roger. Weather's going to be good, right?

Houston Cap Com

Understand the weather's going to be good.

Conrad

Right. Breaking up for a nice one.

Houston Cap Com

OK. We've got about 4 seconds.

Conrad

Roger.

Houston Cap Com

Ignition. It's on its way.

Conrad

We have him in sight!

Houston Cap Com

Very good. He's tracking right on our course.

Second stage.

Conrad

Say again.

Houston Cap Com

Second stage.

Conrad

You can't do this in pulse mode.

Houston Cap Com

You can't do this in pulse, is that right?

Conrad

That's right.

Houston Cap Com

Have you completed your tracking yet?

Conrad

No, we never did get on him, we never caught up
with him once we saw him.

Houston Cap Com OK. You now have flown for 98 hours and 31 minutes
and 30 seconds, and let me be the first to con-
gratulate you on setting a new American record
for manned spacecraft.

Conrad Thank you.

END OF TAPE

.....it's the Antigua discussion. Just after Ascension, the crew is to perform a section 1 and section 2 hydrogen and oxygen purge. Following that they were to power the spacecraft down, turn off their rate gyros, turn off their computer, as well as their platform. Darkness will begin on this rev at approximately the Tananarive station, which they should meet in about 2 to 3 minutes. At Canarvon they will receive some planned up-dates for the 65-4 area and other planned landing areas, should they be needed between the 65-4, and on through the 70th revolution. Following that, Gordon Cooper is to have some lunch between Canarvon and the States. There'll be a medical data pass over Hawaii, and just after the Canarvon pass, the Pilot Pete Conrad is to catch a nap. This is Gemini Control in Houston.

END OF TAPE

Gemini Control, Houston; 99 hours, 32 minutes. We have the Canarvon tape, the station we just left about a minute ago, ready to play for you at this time.

Canarvon Cap Com Gemini 5, Canarvon Cap Com.

Conrad Roger, Canarvon. Gemini 5 reading you loud and clear. Over.

Canarvon Cap Com Roger. I have a flight plan up-date when you are ready to copy.

Conrad Roger. Wait one. OK. Ready to copy.

Canarvon Cap Com Title, HF 180000, sequence number 04, remarks, end thrust at 192500. This is HF test starting right after Hawaii's LOS. Next item, is S-7, CL-7, 1 niner, 44, 02; sequence number 03, pitch down niner 0. Next item is the OAMS 7210 niner 50; sequence number 03; pitch down, 90. Storm, Doreen. Did you copy?

Conrad Roger. We got those three.

Canarvon Cap Com OK. That's all the flight plan up-date. There will be a medical pass on the command pilot over Hawaii. The AOS time is 1751.

Conrad OK.

Canarvon Cap Com OK, and next we've got a PLA up-date, when you are ready to copy.

Conrad Stand by. Ready to copy.

Houston Cap Com Roger. Area 65 - 4, 204518; 12 plus 10; 18 plus 06;
area 66 - 3, 220246; 14 plus 21; 1 niner plus
31; area 67 - 3, 23 plus 38 plus 00; 13 plus 09;
18 plus 41; area 68 - 3, this is at this date, 01,
12, 44; 12 plus 16; 18 plus 00; area 6 niner delta,
02 05 5 niner; 20 plus 14; 25 plus 03; area 70
delta, 03 38 43; 1 niner plus 31; 24 plus 13;
weather is good in all areas except 66-3 and 67-3,
weather is marginal. Do you copy?

Conrad Had a ball.

Houston Cap Com Very good.

END OF TAPE

Gemini Control here. Within the last minute the Hawaii station has raised the Gemini V spacecraft. Command Pilot, Gordon Cooper, is going through a blood pressure check and the other -- the oral temperature, and the other things associated with the Medical Data pass. We should have some conversation with the spacecraft and the ground. Let's cut in now and find out what is going on.

Cooper ..fine now.

Houston Flight Hawaii, send the C-band off command at 55.

Hawaii Cap Com Roger, Flight.

Houston Flight As planned. And you can ask him if he turned it off.

Hawaii Cap Com Roger.

Cooper Ending exercise now.

Hawaii Surgeon Roger.

Hawaii Surgeon Gemini V, Hawaii Surgeon, your cuff is full scale.

Houston Flight Hawaii. How do you know the beacon is not on?

Hawaii Cap Com Okay, they are reporting they are losing track, and they lost it, and they regained it again, that's happened twice through the pass.

Houston Flight Oh, so the beacon is okay. They tracked from the Wheeling. We got the data.

Hawaii Surgeon We have a good blood pressure, standing by for your water and sleep report.

Hawaii Cap Com I've commanded C-band off Flight.

Houston Flight Rog.

Hawaii Surgeon ... sleep report.

Cooper No sleep since last night when I reported on that.

 The water report, I have drunk 21 pounds and 13 ounces
 of water. I am just in the process of eating now, which
 I have added to that.

Hawaii Surgeon Are you in the process of eating now. What meal would
 that be?

Cooper Just a second here. It's 1 bravo.

Hawaii Surgeon I understand. 21 pounds 13 ounces, no sleep since
 last night, and eating 1 bravo.

Cooper Roger.

Hawaii Surgeon Thank you, Hawaii Surgeon out.

Hawaii Cap Com Gemini V, Hawaii Cap Com. On this HF test, we're
 going to stop it for about 10 minutes over the States
 and will resume at 18 14 00.

Cooper Roger.

Hawaii Cap Com Hawaii has LOS.

Houston Flight Roger.

In that pass you heard Cooper confirm that he had had no additional sleep since last night. His water intake indicated he drank approximately 1 pound from about 2 revolutions ago at the Canarys when he had a report of slightly over 20 pounds, now reporting 21 pounds 13 ounces. I believe he said he was eating meal 1 bravo on day 4. That meal includes beef and vegetables, potato salad, cheese sandwiches, strawberry cubes and an orange drink for a total calorie intake of 931 calories. This is Gemini Control Houston at 99 hours 57 minutes into the mission.

END OF TAPE

Gemini Control in Houston here, 100 hours even, 100 hours even in the mission. The California station should acquire momentarily and as we swing down across Mexico on this pass, the crew will perform a number of HF tests. They will orient the spacecraft around in various positions and test their various antenna using the HF bandwidth instead of the usual UHF mode. Of some interest may be the fact that during the earlier State side activity in the two previous passes with much of the equipment powered up, we were pulling an amperage load of 41, 41 amps. We are now powered back down. We are pulling a load now of about 18.6 amps, and the spacecraft will probably remain in this configuration. We are standing by here, we should have contact by either our California or Guaymas station momentarily and when we do we will play it for you immediately. There is the telemetry solid signal from the Guaymas communicator.

Guaymas Cap Com How are you doing?

Cooper Roger, doing fine.

Guaymas Cap Com Okay, you're looking good here on the ground. I'd like a readout of your OAMS propellant quantity, pressure, and temperature please.

Cooper Roger, OAMS propellant quantity is 20 percent, temperature is 75 degrees, and pressure is 1350.

Guaymas Cap Com Say again the pressure.

Cooper 1350.

Guaymas Cap Com Roger. I copied. I thank you. Standing by if you need anything else.

Cooper Okay, fine. Thank you.

Guaymas Cap Com Flight, Guaymas. Did you copy.

Conrad For your information we read Hawaii on HF all the way to your call.

Guaymas Cap Com Very good.

Guaymas Cap Com Flight, Guaymas.

Houston Flight Go ahead.

Guaymas Cap Com On the ground readout on that temperature, there is a correction on our part. That was 76 degrees instead of 68.

Houston Flight Roger.

Houston Cap Com Gemini V, Gemini V, Houston.

Cooper Roger Houston, Gemini V. Go ahead.

Houston Cap Com Roger, I have some information here for you. that I would like to read up to you. One is a map and star updates. Ready to copy?

Cooper Wait one second here. We will be.

Houston Cap Com Okay. While you are getting ready, I've got some questions. Can you tell me if the Command Pilot is doing the M-9 with the left or right eyepiece.

Cooper With the right eyepiece.

Houston Cap Com Okay, I'd also like to know if each pilot is getting 5 readings when you do the M-9 experiment?

Cooper Negative. We've just been taking 1 reading.

Houston Cap Com Okay. .

Cooper They have always been the same.

Houston Cap Com Okay,* have you been able to get successive S-6 pictures on successive passes over the same particular piece of weather?

Cooper Two or three times when we have.

Houston Cap Com Very good. Can you give us a film and voice tape report of what you have taken and what you have left?

Cooper We've got lots of voice tapes here. We haven't used much of any of them. We are on our fifth voice cartridge now on tape.

Houston Cap Com You say you have 10 left?

Cooper We have 18 left.

Houston Cap Com 18 left, roger.

Cooper We have used two full 70-mm film magazines plus $\frac{1}{2}$ or about one-third of another one.

Conrad On the D-6 pictures on the 3401 we probably have taken 50 or 60 pictures now, I'll have to add it up. But that is the only one that we would be low on. The 8443, we've got plenty left, probably 55 pictures left, and on the 3401, I think we have probably 50 pictures left.

Houston Cap Com Okay. And you have taken 2 full 70 mm film packs plus one-third of another one.

Cooper That's correct. On experiment S-1 we are still on our first 16-mm camera package. We've got three of those left.

Houston Cap Com Okay, you've got three 16-mm packs left?

Cooper We've got a question for you.

Houston Cap Com Okay.

Cooper We're in the middle of this HF test now Now the
write up of this HF test calls to be stabilized in
Horizon Scan.

Houston Cap Com Roger.

Cooper Is it desirous to use our last horizon scanner for
an HF test like this?

Houston Cap Com No you can go ahead and just hold your attitude
using the pulse mode, Gordo. And just make sure
that you stay near the zero roll and zero pitch
attitude.

Cooper Okay.

Houston Cap Com Gemini V, we'd also like to have you keep your
power level down so that we don't use up too much
of the reactants.

Cooper Roger. We're completely powered down now.

Houston Cap Com Okay, very good.

Conrad We're ready for the map update.

Houston Cap Com Okay, if you're ready for the map update, here it
comes. Time for both the map and star update is
06 17 36 22. The map update is 134.0 degrees east,
for rev 63. Star update is 0 16 41.

Conrad on the star update.

Houston Cap Com Okay, Dr. Berry would like to talk to you for a couple of minutes.

Houston Surgeon Gordo and Pete, you've had 100 hours, 11 minutes, and 35 seconds now, and we'd just like to tell you that all the data that we are seeing down here looks really excellent. All the rates and pressures are still well within normal ranges, no abnormal changes at all. We think you are doing beautifully as far as water intake is concerned. We're delighted with this. The food seems to be going okay too. And we do feel that you still need to keep pushing on that sleep and I guess you feel the same way and we are going to try and help with that. Are you still comfortable as far as the spacecraft is concerned. Are you having any more times when you feel cool?

Cooper Every time we power down at night it gets pretty cool in here, but we'll overcome some night.

Houston Surgeon Very good. Pete, we have checked on this cuff business and we feel that the - that you have just run out of gas, so what we'd like for you to do is to turn that switch off and then if you desire, at your option depending on how much bother you are having with the cuffs, you may try and remove those

cuffs if you think you can do it. It's up to you.

Conrad

Okay, I'm going to try and take them off because when the heat load is up, I sweat around the legs and that makes them itch right there very badly and as long as it's not running, it's not doing me any good.

Houston Surgeon

That's right Pete, and I think you ought to, if you can, feel free to cut through the cuffs if you want. Just be careful when you are using the scissors there.

Conrad

Okay. Well, I've been out of the harness once already and back in again, so I can get them off, all right, I'm not worried about that.

Houston Surgeon

Okay, fine. Let's try that. I think you ought to get them off. It will be a lot more comfortable. It's still going to give good data Pete, because we feel that with the , it's still going to give us comparison with the 4 days that we had.

Conrad

Sorry it's run out of air. We heard it running two or three times back at -- during test time and we told them about it, but nobody seemed to pay much attention to it, so I guess it's been leaking down.

Houston Surgeon

Oh, boy. We need a new gas supply. You might breathe on it a while.

Cooper Are you still there Chuck?

Houston Surgeon Yes sir.

Cooper One of the problems on the sleep cycle is that some of our sleep cycles have been falling during the normal East Coast daytime cycle.

Houston Surgeon Rog. Okay.

Cooper ... to be sleepy then, we are a little bit, you know, you just don't go to sleep very easy then, whereas during the Cape night cycle, we always seem to get sleepy.

Houston Surgeon Okay, are you doing better with these nap times now Gordo as the days go on. Is it easier to go to sleep during the nap periods or not?

Cooper Oh, I don't think we've really had trouble with the nap periods. We each power down for those periods for 30 or 40 minutes several times during the day and get a little naps. But for the long sleep period, we really had trouble getting these lengthy sleeps.

Houston Surgeon Okay, we'll check these times out pretty carefully with Jerry, both Jim and I want to do that after the shift today and we'll try and get something worked out on this flight plan and on the sleep times with him.

Cooper That's the big thing on the longest sleep period. There is too many interferences where you just

couldn't settle down and sleep there.

Houston Surgeon I think we've got that squared away now Gordo.

Cooper Okay, real fine.

Houston Surgeon Good trip.

Conrad Yeah, we've felt real good up here. No problems.

Houston Surgeon Very good. We are going to keep it that way for the rest of the time then.

Cooper We've felt lots better since we've got our suits off, but ..

Houston Surgeon Which suits??????????

Houston Surgeon You want to check my pulse rate?

Houston Cap Com Gordo, tell Pete about Enith.

Cooper Yeah.

This is Gemini Control here. I think that wraps up the -- that particular pass. Gordon Cooper's remark, of course, about they feel a lot more comfortable with out their suits brought Dr. Berry right up out of his chair. We are sure it was in jest, but it elevated his pulse rate. This is Gemini Control Houston at 100 hours 18 minutes into the mission.

END OF TAPE

This is Gemini Control Houston here, 100 hours, 32 minutes into the mission. We've had no contact since our last report. Things here in the control center generally are just like the spacecraft, in a rather powered down configuration. Flight director's been out for the last 15 to 20 minutes on a lunch break. Other controllers comparing notes with their counterparts in the back rooms, generally a period of relative inactivity. Flight plan calls for Pete Conrad to be taking a nap and Gordon Cooper should have completed a meal by now. He is between Ascension and Tanarieve. Tanarieve, the night side on this pass beginning some ten minutes prior to Tanarieve. This is Gemini Control Houston.

END OF TAPE

Gemini Control at 101 hours and 2 minutes into the mission. Word from the Cape on the OSO launch is that a premature burn of the third stage was the cause of trouble and that satellite never became a satellite. It fell into the south Atlantic Ocean. Johannesburg station advised that they never acquired So presumably OSO did not achieve orbit. The two numbers on the Minuteman launch this past revolution, the time of the Minuteman liftoff was 28 minutes seven seconds after the hour, that would be 10:28, 07 Houston time. The time of closest approach of the Minuteman and the Gemini 5 spacecraft was 10:28 46 Central Standard Time. The closest approach, from a slant range point of view, was 182 statute miles, that would have been with the missile slightly above the spacecraft and just about abreast of each other on a longitudinal basis. The spacecraft was flying a ground track that carried it 139 miles south of the Minuteman Silo at Vandenberg.

We've had a long quiet period here with the spacecraft now over the East Indies coming out across the Pacific and no contact since at the states.

This is Gemini Control.

END OF TAPE

Cooper Hawaii, Gemini 5 here.

Hawaii Cap Com Go ahead.

Cooper Roger. We completed all the experiments that were assigned for today, except one portion of 4-10 Charlie, D-4, D-7, 4-10 Charlie.

Hawaii Cap Com Roger.

Cooperthat were deleted by the time we got there for one reason or another, due to weather.

Hawaii Cap Com OK.

Cooper All that were assigned we completed.

Hawaii Cap Com Did you copy, flight?

Houston Cap Com Affirmative.

Hawaii Cap Com OK, we're copying the dump off the one, I got the TX in.

Houston Cap Com Roger.

END OF TAPE

Gemini Control, Houston here; 101 hours, 49 minutes into the mission. Spacecraft is beginning right now its 65th revolution, crossing the 80th parallel on the northwest coast of South America. We have about 3 minutes of conversation, intermittent conversation, with the Guaymas station. The principal point of discussion is Gordo is having to look back at his log to check on the time of a certain experiment, a certain experiment and whether he had done it. The reference is to a D-6 experiment, a picture taken of the Lake Champlain taken earlier today. Here's the tape now.

Guaymas Cap Com Gemini 5, Guaymas Cap Com.

Cooper Go ahead, Guaymas, Gemini 5.

Guaymas Cap Com OK, you're looking good here on the ground. How are you doing?

Cooper Roger. Doing fine. Everything's green here.

Guaymas Cap Com OK. I would like the amount of time left on your D-4, D-7 experiment recorder.

Cooper Stand by just one minute.

Guaymas Cap Com OK. While he's getting that, flight, I'm getting a reading on my delayed time transmitter, but I believe the carrier's still out.

Cooper Roger. Sixteen minute's time last night.

Guaymas Cap Com Did you say sixteen minutes, Gordo?

Cooper That's affirmative.

Guaymas Cap Com OK. Did you complete D-6 134-08? And the timer on that was 04115555.

Cooper What was the time on that again?

Guaymas Cap Com OK. The support date 115555.

Cooper Let me look it up in our D-6 log. I have it here that we did do, but let me double check it.

Guaymas Cap Com OK.

Cooper Negative, we didn't complete that one.

Guaymas Cap Com OK, thanks very much. Flight, did you copy all that?

Houston Cap Com Affirmative.

Guaymas Cap Com OK. OK. We'll stand by here if you need anything else.

Cooper Real fine, we did get 134 though, 150448. Report that.

Guaymas Cap Com Report that. All righty.

Houston Cap Com What did he say there, Ed?

Guaymas Cap Com He said he did 134, and the time on that though was on the fourth day...(interrupted by Cooper)

Cooperwe got it today.

Guaymas Cap Com Say again.

Cooper We didn't get that from the first time, but we did get it today.

Guaymas Cap Com OK. He said he didn't get it the first time, but he got it today at 04150440, and he completed it.

Houston Cap Com Say that time again, Ed.

Guaymas Cap Com Fourth day, 1504 40.

Houston Cap Com Roger. Thank you.

Guaymas Cap Com OK.

END OF TAPE

Gemini Control Houston, 102 hours 2 minutes into the mission. We have no new status to report on the spacecraft itself, out of contact since the swing down the West Coast of North America. Into the Control Center has come the White Team. They look all rested and ready, and the normal kind of discussion that takes place at every shift change is going on now with the new operators sitting down and comparing notes for at least a half hour before they assume control of the Console. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control. We are now 102 hours and 34 minutes into the flight of spacecraft Gemini 5 which, at the present time, is just coming up over approximately Singapore, and very shortly will pass over the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean. At the present time here in the Control Center, we are in the midst of a shift change with the White Team of flight controllers ready to take over from Christopher Kraft, our flight director, and his team of Red flight controllers. We have a message to pass to the spacecraft as it comes over the Coastal Sentry Quebec. That message was initiated by the Weather Bureau people who are interested in having our astronauts take some visual observations of a tropical storm named Doreen and located approximately 1500 miles east of Hawaii. We have located this storm on a weather map and are feeding this weather map to you in our news center. The press conference that is normally held at approximately 3:30 each day will be held at about the same time today, and very shortly now Flight Director Chris Kraft and several of his flight controllers will move over to the press center. This is Gemini Control at 102 hours, 36 minutes into the flight of spacecraft Gemini 5.

END OF TAPE

This is Gemini Control at 103 hours 2 minutes into the flight of spacecraft Gemini V which at the present time is on it's 65th revolution over the earth and now passing over the Hawaiian tracking station. A few minutes ago as the spacecraft Gemini V passed over the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean, the Flight Surgeon, one of the Flight Surgeons aboard the Coastal Sentry Quebec was taking a turn on deck and he reported that he saw Gemini V in the sky passing over that station. He said the visual sighting was superb. He said it was rather thrilling to see the spacecraft come over. They also reported that the Command Pilot, Gordon Cooper's voice was excellent, his pulse and respiration were very regular. We will now play back the voice communication between the Coastal Sentry Quebec tracking ship and spacecraft Gemini V.

CSQ Cap Com Gemini V, CSQ Cap Com.

Cooper Roger CSQ, Gemini V.

CSQ Cap Com Roger. We are go on the ground and have some information on tropical storm that I'd like you to look at, over.

Cooper Okay, we're go here. Just a second. Let me get my pencil I'll copy.

Cooper Okay, I'm ready to copy.

CSQ Cap Com Roger, Weather Bureau estimates tropical storm Doreen 200 nautical miles left of course SEE. Closest approach time 21 09 19. We'd like to know the time and distance to the eye of the storm.

Would you estimate that you are in closest
approach, over.

Cooper Okay, the time and estimated distance to the eye
of the storm. Is that affirmative?

CSQ Cap Com Roger. We'd like the time plus the estimated
distance.

Cooper Okay, fine.

Cooper Okay, I've got this.

CSQ Cap Com CSQ.

END OF TAPE

This is Gemini Control. We are at 103 hours and 32 minutes into the flight of spacecraft Gemini 5 which is now passing over South America on its 66th revolution over the earth. Just a few minutes ago spacecraft Gemini 5 passed over the Rose Knot Victor, our tracking ship off the west coast of Peru, and at that time we were in voice communication with Command Pilot Gordon Cooper, and as they passed over, the RKV (Rose Knot Victor) reported all systems in the spacecraft looked good from that tracking ship. They also told Cooper the weather in the Pacific, where the ship is located, is good, clear, and calm. Command Pilot Cooper gave a report on tropical storm Doreen which he said he could see approximately 250 miles off his flight path. We will now play back that tape of the voice communication between the Rose Knot Victor and Gemini 5.

RKV Cap Com Gemini 5, RKV Cap Com.

Cooper Understand, RKV, Gemini 5.

RKV Cap Com Roger. We'd like to get your estimate of the time of post approach and the distance to the eye of the storm Doreen.

Cooper Roger.eye of the storm was 250 nautical miles to the left of our course; at the time of post approach it was 210 niner 30.

RKV Cap Com Roger. I copied.

Cooper And pass on to MCC that I got ..7 photographs and Weather Bureau photographs of it. Over.

RKV Cap Com Roger. Understand. Gemini 5, we would like for you to cycle through your quantity read switch. You don't need to give us a spacecraft read out.

Cooper OK.

RKV Cap Com Hold it on this one for a moment.

Cooper All right.

RKV Cap Com OK. Fuel cell hydrogen. Gemini 5, you may turn the switch to the off position. Thank you.

Cooper Roger.

RKV Cap Com All systems look real good here on the ground. We have nothing else for you this pass. We'll be standing by.

Cooper OK, fine. How's your weather been?

RKV Cap Com It looks real good down here. The seas are real calm and clear.

Cooper Good.

RKV Cap Com Houston flight, RKV Cap Com.

Houston Cap Com Go, RKV.

RKV Cap Com All systems look real good here on the ground. The quantity read out percent full scale, ECS O₂, 83.8; fuel cell O₂, 85.8; fuel cell H₂, 5 minor point 8. This is percent full scale.

Houston Cap Com Roger, copy.

END OF TAPE

This is Gemini Control. We are at 104 hours 2 minutes into the flight of Gemini spacecraft 5, which is now passing over the Indian Ocean on it's 66th revolution over the earth. We have had no voice communication with the spacecraft since it passed over the Rose Knot Victor tracking ship about 30 minutes ago. At that time, all the spacecraft systems were looking good and the flight crew was in excellent condition. At this time, Command Pilot Gordon Cooper is scheduled to be in a sleep period. Pilot Pete Conrad, according to the flight plan will shortly be conducting a cabin lighting survey as he approaches the Hawaiian tracking station. This is Gemini Control.

END OF TAPE

This is Gemini Control at 104 hours and 32 minutes into our mission, the flight of spacecraft Gemini V, which at this time is coming up over the Hawaiian Tracking Station in the Pacific Ocean. We have had very little voice communication with the spacecraft for approximately the past 1 hour and we have nothing new to report from the spacecraft cabin. The last time we had a good voice conversation over the Rose Knot Victor on the last revolution, everything was in fine condition. The pilots were in good health and all systems were go. Coming up now over the Hawaiian Tracking Station with Command Pilot Gordon Cooper in a sleep period and Pilot Pete Conrad on the watch. He will probably take another look at tropical storm "Doreen" which is located east of Hawaii and the intention of the flight crew was directed toward the storm by our weather people on our last revolution, so we assume Pete will take another look at that storm. This is Gemini Control at 104 hours and 33 minutes into the flight.

END OF TAPE

This is Gemini Control at 105 hours and 2 minutes into the flight of spacecraft Gemini 5, which is now approaching the West Coast of South America on the 66th revolution. A short while ago, as the spacecraft passed over Hawaii, Pilot Pete Conrad sounded pretty cheerful. He greeted Command Spacecraft Communicator, Bill Garvin, with a cheery "Hello Hawaii." Garvin told Conrad he looked green from the ground. Conrad said, "We're the same up here." Garvin told Conrad that his orbit values were 164.2 nautical miles apogee, and 106.9 nautical miles perigee, and that the spacecraft orbital lifetime was $14\frac{1}{2}$ days. Conrad cracked, "Get serious." We will now play back that first communication between spacecraft Gemini V and the Hawaiian Tracking Station.

Hawaii Cap Com Gemini V, Hawaii Cap Com.

Conrad Hello Hawaii Cap Com, Gemini V. Go.

Hawaii Cap Com Roger. We've got you green on the ground, how are you doing?

Conrad Green up here.

Hawaii Cap Com Would you cycle your quantity read switch to fuel cell O_2 ?
Fuel cell H_2 ?

Hawaii Cap Com Flight, do you want him to leave that switch in ECS O_2 ?
He had it on coming over the hill.

Houston Flight Negative.

Hawaii Cap Com Okay, we'll have him turn it off.

Hawaii Cap Com Okay, you can place the switch to off. Be advised your orbit is 106.9 by 164.2 and your orbit lifetime is $14\frac{1}{2}$ days from now.

Conrad Get serious. Roger, give me the orbit. Was it 164?

Hawaii Cap Com It was 106.9 by 164.2.

Conrad Okay! Thank you!

Hawaii Cap Com It appears that all looks good, Flight.

Houston Flight Roger, Hawaii.

Conrad How's the weather down there today?

Hawaii Cap Com Real nice. The sun is shining.

Conrad We haven't been able to pick up the Islands yet. We're in drifting flight.

Hawaii Cap Com How are you doing with that cabin lighting survey?

Conrad Okay. I'm working on it right now.

Hawaii Cap Com We completed the dump, Flight.

Houston Flight Roger, Hawaii.

Hawaii Cap Com Flight, those quantity readouts on the ground were:
ECS O₂, 82, fuel cell O₂ was 88.1..

Houston Flight Stand by, -Bill. Okay. Give them to me again please.

Hawaii Cap Com Okay. 82, 88.1, and 59.

Houston Flight You'll have to try me again Bill. Fuel cell O₂ is 88.1?

Hawaii Cap Com Fuel cell O₂ is 88.1, ECS O₂ was 82, and fuel cell H₂ was 59.

Houston Flight I'm going to talk to E Com down here, Bill. We're not really plotting ECS O₂ anymore, because the curves been flat for so long that I think it's a waste of time to ask the crew to get measurements on it, except for maybe once a day anymore.

Hawaii Cap Com Roger.

Houston Flight I'll advise you. Are those PFS readings or what, Bill?

They look like --.

Hawaii Cap Com Those are meter reading.

Houston Flight Those are your meter readings?

Hawaii Cap Com That's affirmative. Not just any full scale.

Hawaii Cap Com Hawaii has LOS.

Houston Flight Roger, Hawaii.

END OF TAPE

This is Gemini Control at 105 hours and 32 minutes into the flight of spacecraft Gemini 5 which at this time is in its 67th revolution around the earth and just moving out over the Indian Ocean. It will shortly come up over the Coastal Sentry Quebec, our tracking ship located in the Pacific. Our last voice communication was approximately 30 to 40 minutes ago. We do expect to have some communication with the Coastal Sentry Quebec. We have talked a lot about the Coastal Sentry Quebec and we thought at this time it might be a good idea to give you a little description of that tracking ship. The Coastal Sentry Quebec is a converted liberty ship. It is used to support various government projects including tracking and communications tasks for manned and unmanned NASA space programs. There are some 35 technical personnel aboard along with 50 to 60 ship personnel. During man flights the Manned Spacecraft Center of NASA sends a 4-man team aboard. They are Arta J. Roy, Jr., Spacecraft Communicator; Ted A. White, and George W. Conway, Systems Engineer; and Joe R. Perry, who simulates the astronauts during NASA network simulations or test runs. During the actual flight Perry will assist in other tasks. Between manned launches the Coastal Sentry Quebec lends support to other U. S. Government projects. This is Gemini Control at 105 hours and 33 minutes into the flight of spacecraft Gemini 5.

END OF TAPE

This is Gemini Control at 106 hours and 2 minutes into our flight of the Gemini 5 spacecraft. Our flight crew consisting of command pilot Gordon Cooper and pilot Pete Conrad have just passed north of the Coastal Sentry Quebec tracking ship in the Pacific. Command pilot Cooper is still in his sleep period. Pilot Pete Conrad, talking to spacecraft communicator Arta J. Roy on the Coastal Sentry Quebec, said he is getting a very good look at Japan - that this is the best weather so far, and Japan looks very pretty. We are now on our 67th revolution over the earth, and at this time all systems, as reported by the tracking stations and tracking ships on the ground, are in a green and go condition. The flight crew reports they are go. This is Gemini Control.

END OF TAPE

This is Gemini Control at 106 hours and 32 minutes into the flight of spacecraft Gemini 5 which at the present time is coming up over the Rose Knot Victor, our tracking ship located off the West Coast of Peru. We are in the 67th revolution over the earth, and as a matter of fact, we'll - within minutes - start the 68th revolution. At the present time our command pilot Gordon Cooper is still in his sleep period, and pilot Pete Conrad is scheduled to make a medical data pass over the Rose Knot Victor. Like the CSQ, or Coastal Sentry Quebec, the Rose Knot Victor is a converted liberty tracking ship. It is assigned to U. S. government tracking and communications projects including manned and unmanned space probes. During the NASA manned space flights the Manned Spacecraft Center sends a 5-man team aboard the Rose Knot Victor. They are Gary B. Scott and James R. Foucci, Spacecraft Communicators; Herbert A. Harmon and Albert W. Barker, Systems Engineers; and George N. Bliss, who simulates the astronauts during network tests, and then has other tasks during the manned launches. We are just within minutes now of picking up that 68th revolution, and for this time this is Gemini Control.

END OF TAPE

This is Gemini Control. We are at 107 hours and 2 minutes into the flight of spacecraft Gemini 5 now on its 68th revolution around the earth, and at the present time passing over Central Africa. Our last voice communication with spacecraft Gemini 5 was about 20 minutes ago as the spacecraft passed over the Rose Knot Victor tracking ship off the west coast of Peru. At that time command pilot Gordon Cooper was still asleep, and pilot Pete Conrad made a medical pass over that station. This consists of temperature, 2 blood pressures, one before and one after an exercise period. He also gave the Rose Knot Victor a report on his water intake which he said was 22 pounds since the flight began. He, in addition, reported that he had taken a full 2 hour nap and that he had just polished off a full meal and plus some other goodies that they had left over from other meals. The spacecraft is in a go condition he reported and the ground said your systems all look good from here. We will now play back that voice tape made over the Rose Knot Victor tracking ship.

RKV Cap Com Gemini 5, this is RKV. We have a valid temperature; standing by for your blood pressure. Gemini 5, this is RKV surgeon. Your copy is full scale. Gemini 5, RKV surgeon. We have a good blood pressure. Give me a mark when you start your exercise please.

Conrad Standby. Mark.

RKV Cap Com Gemini 5, RKV surgeon. Your copy is full scale. Gemini 5, RKV surgeon. We have a good blood pressure. Standing by for your water report.

Conrad Roger. This is the pilot. And I've had 22 pounds of water,

got a full 2 hours nap, and I just polished off meal 1 Charlie
at 04220000 plus some extra goodies we had left lying around.

RKV Cap Com That was meal 1 Charlie?

Conrad That's affirmative.

RKV Cap Com Roger. Thank you. Back to our Cap Com. Gemini 5, this is
RKV Cap Com. All systems are good on the ground.

Conrad Gemini 5 go up here.

RKV Cap Com Roger.

END OF TAPE

This is Gemini Control at 107 hours and 32 minutes into the flight of spacecraft Gemini 5 which is now on its 68th revolution over the earth and has just passed over the Coastal Sentry Quebec, our tracking ship located in the Pacific south of Japan. There was very little voice conversation during this pass. The tracking ship gave Conrad a go from the ground - said his systems looked good up there. They then updated the star map aboard the spacecraft, and Conrad reported that he had purged the fuel cells, and that was the end of our voice conversation. Everything is going in the CC and with our tracking network - the NASA tracking network throughout the world and with the gentlemen aboard the spacecraft. This is Gemini Control at 107 hours and 33 minutes.

END OF TAPE

This is Gemini Control at 108 hours and 6 minutes into the flight of spacecraft Gemini 5. We are at the end of the 68th revolution, and our flight crew is passing over the Rose Knot Victor, our tracking ship located off the west coast of Peru. We will have voice contact between Pete Conrad, pilot of Gemini 5, and Gary Scott, the spacecraft communicator aboard the RKV. Let's listen in now to this live conversation.

RKV Cap Com Gemini 5, RKV Cap Com. How do you read?

Conrad Garbled . . . Gemini 5 here.

RKV Cap Com Roger. All systems are go on the ground, and I have some landing area update for you.

Conrad Okay. Stand by order. Okay, ready to copy.

RKV Cap Com Roger. For these updates, all bank angles will remain the same. That is, roll left 51, roll right 69.

Conrad Then.

RKV Cap Com Seven delta 051556, 17 plus 39, 22 plus 17, 72 - 2, 065239, 15 plus 51, 20 plus 41, 73 - 2, 082811, 14 plus 25, 19 plus 25, 74 - 1, 095111, 15 plus 56, 20 plus 50, 75 - 1, 112635, 14 plus 31, 19 plus 33. Do you copy?

Conrad Roger. Would you give TNTIC on 73, day 2 again please?

RKV Cap Com Roger. 73 - 2, 082811.

Conrad Roger. We copy.

RKV Cap Com Roger. The weather is good in all areas.

Conrad Roger. Very good.

RKV Cap Com Roger. We'd like to remind the command pilot that he has a medical data pass over the CSQ on rev 69. I have a time

for you.

Conrad Roger.

RKV Cap Com 030107.

Conrad Roger. 030107.

RKV Cap Com Roger.

Conrad RKV, Gemini 5.

RKV Cap Com Roger, that's us.

Conrad We just had one of our more spectacular sights of our flight coming into sunset just before you acquired us. Either our cryo-hydrogen or our cryo-oxygen tank vented, and it just all froze when it came out and it looked like we had 7 billion stars passing by the windows which was really quite a sight.

RKV Cap Com Roger. Did you recognize any of the stars?

Conrad I didn't recognize any.

RKV Cap Com Roger. Copy. Gemini 5, RKV, we have just received your tape dump.

Conrad Roger. Very good. Everything looks good here.

RKV Cap Com Roger. We have about one minute before LOS. We'll be standing by.

Conrad Okay. Gemini 5. That's fine. Thank you.

RKV Cap Com You're welcome. Over.

That was live conversation between spacecraft Gemini 5 and our spacecraft communicator aboard the Rose Knot Victor, and I understand we were in error - That was not Gary Scott, our prime communicator, but James R. Foucci who helps out in that capacity. This is Gemini Control.

END OF TAPE

This is Gemini Control at 108 hours 32 minutes into the flight of spacecraft Gemini V. We are now on our 69th revolution over the earth and the flight crew is approaching the west coast of Africa. We have had no voice communication with spacecraft Gemini V since our last voice communication which we carried live over the Rose Knot Victor tracking ship. From our ground stations, all reports are the spacecraft systems are Go. Here in Mission Control we are also Go and this flight is settling down now for the long pull through the night. There is very little activity aboard. Command pilot Gordon Cooper is scheduled to make a medical data pass when the spacecraft approaches the Coastal Sentry Quebec tracking ship in the Pacific and our pilot Pete Conrad is entering a sleep period. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now at 109 hours and 2 minutes into the flight of spacecraft Gemini 5. At the present time our spacecraft is coming up over the Coastal Sentry Quebec, our tracking ship located in the Pacific Ocean south of Japan. On the ground, or aboard the Coastal Sentry Quebec, it is Thursday noon. Here in Mission Control Center in Houston it is still Wednesday evening. The activities slated for this pass will consist of a medical data pass on the command pilot, Gordon Cooper, while his partner pilot Pete Conrad is in a sleep period. Cooper is also expected to give a food report, and there will be taped telemetry transmission. Data that the spacecraft has been gathering will be passed on to that tracking ship by telemetry. So far the flight is now in a very uneventful phase and the pilot and co-pilot are getting a maximum amount of rest, and we have no further experiments programmed for the immediate next couple of revolutions. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are at 109 hours and 32 minutes into the flight of spacecraft Gemini V. At the present time our spacecraft and flight crew are in the south Pacific, approximately center south Pacific. Coming up, they will be skirting the Rose Knot Victor tracking ship and will pass just within voice range. We have not had a communication with the spacecraft for quite some time and our flight plan indicates that this is a period of inactivity. Pilot Pete Conrad is asleep. Command pilot Gordon Cooper has finished an eat period and he has one experiment coming up. This is a cabin lighting survey which he will perform within the next hour and this is an experiment in which they measure the light in various portions of the spacecraft using a photometer. This is Gemini Control.

END OF TAPE

This is Gemini Control at 110 hours and 2 minutes into the flight of spacecraft Gemini 5 which has just shortly ago begun its 70th revolution around the earth and at the present time is coming up on the west coast of Africa. We have some information here on the apogee and perigee of the RFP. The apogee at this time is 141.8 nautical miles and 85.7 nautical miles perigee. The orbital is 86.67 from perigee to perigee. And we figure it has 15 day 2 hour and 44 minute life-time as of this moment. In our spacecraft command pilot Gordon Cooper is awake and pilot Pete Conrad is in a sleep period. The command pilot will shortly perform a cabin lighting survey measuring the amount of light that is coming into the spacecraft at various points and using a photometer. At this point we have had very little communication with the spacecraft recently, and we expect that we will have some voice communication over either the Keno, Nigeria site, or the Coastal Sentry Quebec. This is Gemini Control at 110 hours and 3 minutes into the flight.

END OF TAPE

This is Gemini Control at 110 hours 32 minutes into the flight of spacecraft Gemini 5. It is on its 70th revolution over the earth and is coming up very shortly - within the next 5 minutes - on the Coastal Sentry Quebec, our tracking ship located in the Pacific south of Japan. We are in the midst here at the Mission Control Center of a shift change. The blue team of flight controllers have reported for duty and are getting their briefing prior to taking over direction of this flight. At last check with Dr. Duane Catterson, our flight surgeon, he said that all indications that he has at this time from ground data and from data passed from the spacecraft to the ground indicate that the pilot, co-pilot - command pilot and pilot - of spacecraft Gemini 5 are both in excellent condition. At this point pilot Pete Conrad is asleep and command pilot Gordon Cooper is awake. He is slated to perform a few experiments: a cabin lighting survey and some photographic experiments as he comes over Hawaii. This is Gemini Control at 110 hours and 33 minutes.

END OF TAPE

This is Gemini Control, 111 hours and 2 minutes after lift-off. Gemini V presently is over south-central Pacific nearing the end of the 70th revolution. Just now it went into the night side of the orbit. Around the world people seem to have their eyes peeled for Gemini V. Our latest report is from Senor Camile Flamario in Guadalajara, Mexico, who visually sighted Gemini V at 5:49 this morning, 25 August, and he said it was apparently the equivalent magnitude of a third-magnitude star. The next station which will acquire Gemini V will be the tracking ship Rose Knot approximately 13 minutes from now. We have a tape recording of the air-to-ground transmission between Gemini V and the tracking ship Coastal Sentry just north of Okinawa. We'll hear this tape now.

CSQ Cap Com Gemini V, CSQ

Cooper Garbled

CSQ Cap Com We want you to cycle your cryogenic quantity
readout switch through the positions please.

About 10 seconds in each position.

And we would also like to get your out.

Cooper Garbled

CSQ Cap Com your power, CSQ.

Cooper 81 percent, 350 psi, fuel cell good
. 130 psi

CSQ Cap Com Copy.

Cooper Fuel cell hydrogen 55 -- shade under 55 percent
780 psi.

CSQ Cap Com CSQ copy. Houston also wants to know if you
purged the fuel cells between the CSQ and the RKV
in the last rev. Over.

Cooper fuel cells were purged at 0100.

CSQ Cap Com Roger, understand. There is one in the flight
plan between CSQ and RKV they thought you might
have picked up without being notified to do.

Cooper Negative.

CSQ Cap Com Roger.

Cooper We did have one short of the CSQ last time.
The. . . . over large amount of venting. We
checked the pressures of what appeared to be
the ECS O2 which was up to a very high vent
pressure.

CSQ Cap Com Roger, copy. Houston would also like to know
if the running report over the RKV on the last
rev looked like - correction, that was 062 - if
it looked like a lot of stars -- when it looked
like a lot of stars, was that at sunset or several
hours after the purge?

Cooper That was just at sunset. powered off getting

ready for the purge. It appeared to be that we just hit a very large amount of things going on about there. We assumed they must be ECS 02. They looked like a lot of stars, like several million of them.

CSQ Cap Com

That's the same one you reported previously, then.

Cooper

That's right. We haven't seen them since.

CSQ Cap Com

Roger, copy.

END OF TAPE

This is Gemini Control 111 hours 32 minutes after liftoff. Gemini 5 is just crossing the South American coast into the South Central Atlantic, and will be acquired in 5 minutes by the Canary Islands tracking station. During the pass just completed over the tracking ship Rose Knot off the coast of Peru the systems telemetry readouts onboard the tracking ship all looked nominal according to the spacecraft communicator in his report back to the flight director here in Mission Control. This is Gemini Control.

END OF TAPE

This is Gemini Control, 113 hours and 2 minutes after lift-off. Gemini V is presently crossing the northeastern shore of the continent of South America out over the Atlantic, the beginning of the 72nd revolution. They just recently made a pass over the tracking ship Rose Knot in which a brief contact was made. However, the Cap Com said all looked good on the ground and was standing by for further contact if necessary. This will be the RKV, the Rose Knot's last pass for the night. They will be dismissed until several orbits later. The flight plan activities for the coming day are presently being sent out to the Carnarvon station for updating to the crew. This includes an Apollo landmark tracking task somewhere in east Africa, near the Arabian peninsula. In fact all three of these experiments take place in almost the same part of the world. The Apollo landmark tracking task is at 4:25 central standard time. Follows 2 minutes later one of the synoptic terrain photography experiments of east Africa and the Arabian peninsula at 4:27 central standard time. Synoptic terrain photography experiment is large areas of land masses photographed with a Hasselblad camera using a normal angle lens to include very large areas of land mass, and concurrent with that experiment, also at 4:27, they will be making desert land measurements using the radiometric sensors aboard the spacecraft. At 4:50 they will do a power-up procedure onboard the spacecraft, and aline the inertial platform, and at 5:20 central standard time

they have the task of alining the platform with the small end forward for a later task that will be done today - an additional radar test. Further details on this radar test will be forthcoming. This is Gemini Control.

END OF TAPE

This is Gemini Control, 113 hours and 32 minutes after lift-off. Gemini V is approximately one-third of the way through the 72nd revolution. It will be acquired by the Carnarvon station in 46 minutes. Passed over Canary Island station and there was a brief exchange between the Cap Com there and command pilot Cooper. The telemetry readouts on the ground at Canary looked real good. They also made a telemetry delayed-time dump and then the station went on stand-by for further contact and there was none. This is Gemini Control.

END OF TAPE

This is Gemini Control, 114 hours and 2 minutes after lift-off. Gemini V is nearing the end of the 72nd revolution, just crossing north of the tip of the island New Zealand. At this time pilot Conrad is scheduled for sleep, and during the next few minutes command pilot Cooper is scheduled on the flight plan to run a vision test on himself using the onboard vision tester, and then using the same device, he will perform one of the vestibular effects experiments to determine the changes in his vestibular functions and also which will determine his ability to judge the pitch axis of the spacecraft. This is involving the so-called otolith function in the inner ear. When Conrad wakes up at about the time of the pass over the Antigua station he will be briefed by Cooper on the activities during the flight during the period he was asleep. This is Gemini Control.

END OF TAPE

This is Gemini Control, 114 hours and 32 minutes after lift-off. The spacecraft is now almost through the end of the 72nd revolution and will be in contact with the stations in the Eastern Test Range within about 1 minute. There has been no contact with the spacecraft since the Canary Island station almost 80 minutes ago. This is Gemini Control.

END OF TAPE

This is Gemini Control, 115 hours 14 minutes after lift-off. Gemini V is approximately one-third of the way through the 73rd revolution and will be acquired by the Carnarvon, Australia station at 21 minutes past the hour. We have a tape of the Carnarvon -- or the Canary Island tracking station pass at the beginning of this 73rd revolution. Let's hear that tape now.

Canary Cap Com Gemini V, this is Canary Cap Com.

Cooper Go ahead Canary, Gemini V.

Canary Cap Com Roger Gemini V. If the pilot is awake we would like to do a purge.

Cooper All right.

Canary Cap Com OK. We would like to start out with the quantity readings first. We'll need about 15 seconds in each position.

Cooper

Canary Cap Com Roger, would you give me a readout? We would like to get a spacecraft readout on these quantities. Roger, we're reading 80 percent quantity. We're reading 845 psia.

Canary Cap Com Roger.

Cooper Fuel cell O₂ we're reading 88 percent, we're reading 140 psia.

Canary Cap Com OK.

Cooper Fuel cell hydrogen, we're reading 52 percent and
 we're reading 770 psia.

Canary Cap Com Roger. OK, we're ready for your purge.

Cooper Stand by for hydrogen on cell 1 on my Mark. MARK.
 Complete. Stand by for hydrogen on cell 2. MARK.

Flight Control Canary, is this Houston.

Cooper . Complete with hydrogen on section 1

Houston Flight We'd like an LOS summary.

Canary Cap Com Right.

Cooper Starting oxygen on section 1. Starting now.

Canary Cap Com OK, while your purging on the oxygen, Flight has
 advised that they are keeping an eye on the fuel
 cell water production. They should have a good
 hack on that within the next day or so. They
 think its progressing approximately normal.

END OF TAPE

This is Gemini Control 115 hours 32 minutes after lift-off. Gemini 5 spacecraft is now over eastern Australia midway through their 73rd revolution. To give you an idea of what the crew of Gemini 5 has in store for them today, I'll run over the experiments that will be passed up to them later on today. They have several tasks in surface photography, one at 6:05 c.s.t in the Kenya area of east Africa; and associated with that will be an infrared measurement at the same time. Other surface photography assignments are at 7:14 central time in the southwestern United States; 7:21 in the Bermuda area; 7:33 in west Africa; 8:55 the prime recovery vessel, Lake Champlain, in the west Atlantic; and at 10:32 off the coast of Brazil. They will also be making infrared measurements of the star, Sigma Saggiarius, at 8:05; and also the milky way at the same time period. At 8:34 they will take infrared measurements of volcanoes in Hawaii. Terrain photos, so-called synoptic terrain experiment, which is large land mass photography, at 9:19 this morning they have a photographic assignment in east Africa and the Arabian peninsula. At 10:26 they have a cloud top spectrometer experiment in the Key West area of cloud build-ups there. That just about summarizes what the crew has on their schedule today. There is a radar test of the onboard radar and the plans for that are still being formulated here in Mission Control. Details will be forthcoming. This is Gemini Control.

END OF TAPE

This is Gemini Control 116 hours and 2 minutes after lift-off. Gemini 5 is presently approaching the west coast of Mexico toward the end of the 73rd revolution. The next stations which will acquire the spacecraft are the stations in the eastern test range and some of the State-side stations. The first one to acquire will be in 2 minutes. We have a tape of the recent Carnarvon pass just about 20 minutes earlier in this revolution. Why don't we listen to this tape right now?

Carnarvon Cap Com Gemini 5, Carnarvon. We have a valid oral temp. Stand by for surgeon. Gemini 5, this is Carnarvon surgeon, we're standing by for your first blood pressure. . . . Gemini 5, we have a good blood pressure. Would you give a mark when you begin your exercise?

Conrad Mark.

Carnarvon Cap Com We had a good blood pressure, Gemini 5. Would you give us your water and sleep report, please.

Conrad Pilot's water is 24 pounds, last meal was meal 3 bravo, 05 09 00 00, and I slept about $4\frac{1}{2}$ hours I think.

Carnarvon Cap Com Roger. Copied that. Thank you, Gemini 5. Carnarvon station out. Gemini 5, Carnarvon Cap Com. We have flight plan update. Are you prepared to copy?

Conrad Ready to copy.

Carnarvon Cap Com Are you ready to go?

Conrad Ready to copy.

Carnarvon Cap Com Roger. Apollo landmark. All these are on the fifth

day. 10 25 02. Sequence number 208, pitch down 30, yaw left 8 degrees. Next item - S5, Sierra 5 10 27 00. Sequence number 02. Next item - D4, D7 10 27 00. Sequence number 414. Do remarks S5. Next item - platform 10 50 00. Remarks - power up. Next item - radar 11 13 00. Remarks - radar on for warm up. Next item - platform 11 20 00. Remarks - align SEF. Next item - map update 11 27 52. Remarks - rev 74 140.1 degrees west, right Ascension 0 hours 24 minutes. Do you copy?

Conrad

Got it all.

Carnarvon Cap Com

Okay. Next item - radar test 11 43 41. Sequence number 10. Remarks - pitch down 30, yaw right 23. Next item - delta 6, D6 12 05 16. Sequence number 74. Mode number 01. Remarks - pitch down 30, yaw right 19, speed 60. Next item - D4, D7 12 05 16. Sequence number 415. Next item - platform 12 15 00. Remarks - align SEF. Do you copy?

Conrad

Affirmative.

Carnarvon Cap Com

Okay. Next item - radar test 12 34 20. Sequence number 10. Remarks - star photos. Next item - power down 12 50 00. Remarks - radar, platform, rate gyros, and computer off. Do you copy?

Conrad

Affirmative.

Carnarvon Cap Com

Okay. We've got about 20 seconds to LOS. We'll get the rest of this up to you on the next pass.

Conrad Roger.

Carnarvon Cap Com Everything looks good down here, and we're standing by.

Conrad Green up here.

Carnarvon Cap Com Flight, we've had LOS.

Houston Flight Roger, Carnarvon, good pass. How'd that medical data pass look?

END OF TAPE

This is Gemini Control, 116 hours and 32 minutes after lift-off. Gemini V now over central Africa, is just about one-fourth of the way into the 74th revolution. The next station to acquire Gemini V will be Carnarvon station in 23 minutes. While passing over the Carnarvon station, planned landing area updates will be routinely passed up to the spacecraft for revolution 76 through 80. Also, flight plan updates will be passed up to the crew. At the present time the flight plan calls for the crew to be conducting terrain photography experiments and infrared measurements over east Africa and the Arabian peninsula. This is Gemini Control. We have a brief tape of the last stateside pass over the Eastern Test Range tracking stations, voice remoting stations. Let's hear that tape now.

Houston Cap Com Gemini V, Houston.

Conrad Hello Houston, Gemini V.

Houston Cap Com Hi. You look good on the ground. Got any questions?
We're standing by.

Conrad No. You got anything for us after 125000?

Houston Cap Com Rog. But we thought we'd let you get it at
Carnarvon and get a little rest here.

Conrad You guys are OK.

Houston Flight Goodmorning.

Conrad Goodmorning.

Houston Flight All set for another bright day?

Conrad Oh, yeah.

Houston Flight Good. Looks pretty good down here, Pete. We've been going over this fuel -- how much power you got left out of your fuel cells and we think its coming along pretty well. Its kind of tight, but you got it there.

Conrad OK, we've been keeping track of it here, and of course it has been going down pretty thin, but we expect it to.

Houston Flight That's right.

See Pete, it looks like your tightest constraint is going to be the storage space for the water you produce.

Conrad OK.

See How's that for a surprise?

Conrad Nothing surprises me after lift-off.

See Got any comments about the weather up north?

Conrad We were talking about that. I don't know. We're going to take a look at it today.

See OK, been trying to get this water system settled down to see just what our possibilities might be.

Conrad Houston, have you been -- have the other stations been getting all our telemetry and everything all right? We really build up the rates two and a half to three degrees per minute here when this thing vents.

Houston Cap Com Yeah, as far as I know, they've all been getting good TM.

Conrad OK

Houston Cap Com Gemini, Houston here, we've had a little problem with the dump tape and we think maybe the tape is getting a little dirty but its nothing significant.

Conrad We've been up too long.

Houston Cap Com Rog.

Conrad Yeah, Gordo and I figure we've been up long enough now to need a sim on reentry to get brushed up.

Houston Cap Com We'll see if we can't work one in for you.

Conrad OK.

Cooper Do you mean this is the real thing? I thought we had been in the simulator all along.

Houston Cap Com Just pretend you are in the simulator.

Conrad That's what we've been doing.

See I guess you know you've got about 3 hours to go here before a big event.

Conrad Is that what it is? We didn't know exactly what the time was. Can you give us the GMT?

See I think its about, just about exactly 3 hours from now.

Houston Cap Com We'll get it for you.

Houston Cap Com GMT is 13 06 00. Gemini, Houston. The GMT is 13 06 00.

Conrad Roger. We copy. 13 06 00, thank you.

Houston Cap Com Do a couple rolls and a loop.

Conrad We haven't got the fuel.

Cooper That's all we have been doing all day is rolling and rolling.

See Very good.

Conrad We passed a big milestone today. We got into the left-hand food box for the first time and didn't find any Christmas presents, just food.

Houston Cap Com Have you gone all the way through it yet?

Conrad Say again.

Houston Cap Com Have you gone all the way through it yet?

Cooper No, not yet.

Houston Cap Com You never know.

See Have you been in that pouch under the right panel?

Conrad Yeah, we have, as a matter of fact.

Cooper Yeah, what do you think we've been wearing?

Cooper Say, Houston, do you still read us?

Houston Cap Com Rog.

Cooper] Could you give us the GMT time hack, please?

Houston Cap Com Rog. In about 10 seconds it will be 10 16 00, 10 16 00. Two, one, MARK.

Cooper That's pretty good. I'm two seconds slow.

Houston Cap Com Oh, very good.

Cooper Two seconds fast, I mean.

Houston Cap Com Roger, understand.

END OF TAPE

This is Gemini Control 117 hours and 2 minutes after lift-off. Gemini 5 is midway through the 74th revolution and is presently in contact with the spacecraft communicator at the Carnarvon, Australia tracking station. The spacecraft communicator there is updating the crew on planned landing area numbers, also updates for flight plan activities for the coming day. Here in Mission Control the blue team flight dynamics officer has come up with some numbers for the present orbit of Gemini 5, and figures up to perigee of 123.4 statute miles and apogee of 187.6 statute miles. This is Gemini Control.

END OF TAPE

This is Gemini Control 117 hours 32 minutes after lift-off. Gemini 5 is coming up on the end of the 74th revolution, will be acquired by the Guaymas, Mexico tracking station in about 2 minutes. During the pass over the Carnarvon, Australia tracking station earlier in this revolution they were given a complete go on the ground. The Guaymas - the Carnarvon Cap Com passed up to the crew the flight plan updates but because of the length of time required for all this information to be passed up he was unable to complete the planned landing area updates. Coming up on the Cape Kennedy area during this next revolution there will be a radar test in which the onboard radar will be aimed toward an L-band transponder at the Cape. And through this method they will be able to get some readings of how the onboard radar operates. We have now a tape of the Carnarvon, Australia tracking station pass earlier in this revolution. Let's hear this tape now.

Carnarvon Cap Com Gemini 5, Carnarvon Cap Com.

Conrad Come in Car, Gemini 5.

Carnarvon Cap Com Okay, we've got the rest of your flight plan update when you're ready to copy.

Conrad Fire away.

Carnarvon Cap Com Roger. First item - Delta 6, D6 13 14 23.

Conrad Carnarvon, Gemini 5. We're ready to copy.

Carnarvon Cap Com Roger. First item is Delta 6, D6 13 14 23. Sequence number 20.

Conrad Say it again. Say, you're fading. We're just beginning to get you.

Carnarvon Cap Com Roger. I'll start again with that first item. It's delta 6, D-6, 131423. Sequence number 20, load number 15, remarks, pitch down ..., yaw left 6 degrees, speed

30. Did you get that all down.

Conrad

Just fine.

Carnarvon Cap Com

Okay, next item. Delta 6 D-6, 13 21 40, sequence number 53, mode number 15, remarks, pitch down 30, yaw left 6 degrees, speed 60. Next item, Delta 6 D-6, 13 33 35, sequence number 66, mode number 15, remarks, pitch down 30, yaw right 7 degrees, speed 60. Next item D-4, D-7, 14 05 08, sequence numbers 4100 and 407. Next item D-4, D-7, 14 34 51, sequence number 425A, pitch down 30, yaw left 03. Next item D-4, D-7, 14 46 46, sequence number 424B. Mode number 01, remarks pitch down 30, yaw left 4 degrees, speed 60.

Conrad

Read out the D-4, D-7 14 34 51?

Carnarvon Cap Com

Say again?

Conrad

Never mind, go ahead.

Carnarvon Cap Com

You got it okay?

Conrad

Yeah.

Carnarvon Cap Com

Okay, on the remarks on the D-4, D-7, 46 46, the test time is 14 47 -- stand by one. Okay, that test time is 14 47 41, duration is 8 seconds. Do you copy?

Conrad

Roger.

Carnarvon Cap Com

Okay, next item is Delta 6 - D-6. 14 55 40, sequence number 134, mode number 01, remarks, pitch down 30, yaw 0, speed 60. Next item S-5, 15 19 48, sequence number 02. Next item S-8, D-13, 16 22 50, sequence

number 03, remarks, pitch down 30, yaw right 33.
Next item S-7, 16 36 50, negative. That time is
16 26 54. Sequence number 02. Remarks, pitch down
30, Key West area. Next item is Delta 6, 16 33 07,
sequence number 055, mode number 01, pitch down 30,
yaw right 1 degree, speed is 60. D-4, D-7, 16 32 59,
sequence number 416. Do you copy?

Conrad

Yeah, in other words, that's just before the D-6
you just gave me?

Carnarvon Cap Com

Right, that last one was a D-4, D-7, woops, stand by
I've got add to that. I'll change that last time.
Okay, that last time is the same time as the D-6,
16 33 07. Copy?

Conrad

Affirmative, any more?

Carnarvon Cap Com

No, we're not going to have time for the PLA update,
we'll get you later.

Conrad

Okay.

Carnarvon Cap Com

Everything looks good here.

Conrad

We are go here.

END OF TAPE

This is Gemini Control, 117 hours and 57 minutes after lift-off. Gemini 5 spacecraft is now in acquisition by the Canary Island tracking station, early in the 75th revolution. During the Stateside pass just completed, Guaymas, Mexico, spacecraft communicator, Ed Pendell, passed up to Gemini 5 the plan landing area updates, which were missed at Carnarvan because of the lack of time with other information being passed up from Carnarvan. During the radar test, over Cape Kennedy, the radar did lock on to the transponder at the Cape but no range readings were given. During the Canary pass, there is scheduled a medical data check on command pilot Gordon Cooper. This is Gemini Control.

END OF TAPE

This is Gemini Control, 118 hours and 2 minutes after lift-off. Gemini 5 presently has just left the acquisition range of Canary Island tracking station, and should be coming up shortly on the range of the Kano, Nigeria voice remoting station. We now have a taped recording of the recent State-side pass. Let's listen to the tape now.

Guaymas Cap Com Gemini 5, Guaymas Cap Com.

Cooper Come in, Guaymas, Gemini 5.

Guaymas Cap Com OK, how are you doing?

Cooper Roger, doing fine, everything's powered up.

Guaymas Cap Com OK. You are looking good here on the ground. I've got a correction to your flight plan up-date, and I've got a PLA, so let me know when you are ready to copy.

Cooper Ready to copy.

Guaymas Cap Com OK, the flight plan up-date and D-4 D-7 sequence 424 Bravo that was at the fifth day 144646, change the time on that to the fifth day 144654.

Cooper Check.

Guaymas Cap Com OK, the D-4 D-7 sequence 415 of the fifth day 120516, add to the remarks column, recorder on for three plus 00 minutes.

Cooper All right.

Guaymas Cap Com OK, I've got your PLA's. Are you ready to copy?

Cooper All set.

Guaymas Cap Com OK. The weather is good in all areas, the bank angle is roll left 51, and roll right 6 niner on all cases.

Area is 76-1, 130153, 13 plus 15, 18 plus 27, 77-1, 143731, 12 plus 0 niner, 17 plus 40, 78-4, 172426, 14 plus 27, 27 plus 13, 7 niner - 4, 185 niner, 4213 plus 11, 16 plus 00, 80-4, 20342 niner, 12 plus 12, 17 plus 43. Over.

Cooper
Guaymas Cap Com Got them all?
Cooper Right.
Guaymas Cap Com OK. That's it. We'll stand by if you need anything.
Cooper OK. Thank you.
Houston Cap Com Very good, Guaymas. How does the roll look?
Guaymas Cap Com Looks real fine, flight. Got the radar on.
Houston Cap Com Roger.
Guaymas Cap Com Getting an infinite radar lock light.
Houston Cap Com Roger.
Guaymas Cap Com Flight, Guaymas.
Houston Cap Com Go ahead.
Guaymas Cap Com TCA 10 head temp is reading 36 degrees, so what position is the OAMS heater switch circuit breaker in?
Houston Cap Com Leave it off.
Guaymas Cap Com Roger.
Cooper Houston, Gemini 5.
Houston Cap Com Gemini, Houston. Go.
Cooper No joy--the radar locked up and the needles pointed, and they pointed right at the Cape, but we never did

get range reading, and I kept breaking lock and putting it back on, breaking lock and putting it back on, but we never got any range reading.

Houston Cap Com Roger. That's what we were afraid of. OK. Try and give the other part of the test a whirl when you get over to it.

Cooper OK.

Houston Cap Com Gemini, Houston.

Cooper Come in, Houston, Gemini 5.

Houston Cap Com Roger. We've got a correction to the correction on your D-4 D-7, all right, 120516, we added recorder on for three minutes to remarks. We would like to delete that statement now. Copy?

Cooper OK.

Houston Cap Com OK, and be advised your Canary's¹ medical data acquisition time is 115534.

Cooper OK.

Houston Cap Com And Gemini 5, Houston, now you can place your TM switch to command, please. Gemini, Houston.

Cooper Roger, we got you.

Houston Cap Com OK, fine, and thank you for the ECS O₂ reading.

Cooper Your welcome.

END OF TAPE

This is Gemini Control, 118 hours and 32 minutes after lift-off. Gemini V is now midway through the 75th revolution is in contact with the Carnarvon Australia Tracking Station. While over the Carnarvon station, they will -- a readout of the environmental control system oxygen also the fuel cell oxygen and hydrogen. We have now a tape recording of the Canary Islands pass earlier in this revolution. Let's hear this tape now.

AFD Canary Cap Com, AFD.

Canary Cap Com AFD, Canary Cap Com.

AFD Okay, you got our special?

Canary Cap Com Right.

AFD Okay, our cap com informed the Command Pilot of your acquisition time. He should be ready with the thermister for the medical data pass.

Canary Cap Com Okay, thank you.

AFD Roger, we're standing by.

Canary Cap Com Okay, we got 4 minutes.

END OF TAPE

This is Gemini Control, 118 hours and 48 minutes after lift-off. Gemini 5 now nearing the end of the 75th revolution is due north of New Zealand in the southwest Pacific. WE have now a tape recording of the recent Carnarvan, Australia, tracking station pass. Let's listen to that tape now.

Cap Com Gemini 5, Carnarvan.

Cooper Carnarva, this is Gemini 5.

Cap Com Roger, we'd like to have you place your quantity reading switch in ECS O₂.

Conrad Roger.

Conrad Carnarvan, you ready to copy a little problem?

Cap Com Go ahead.

Conrad Roger. Our yaw left number 7 OAMS attitude thruster out.

Cap Com Roger, I've got it. Continue with indication here on the ground of the OAMS yaw left thruster.

Conrad Ok. Well, it's not working at all, and we powered the radar down and powered down the gyros, powered down everything but the platform, we're standing by to see what Flight wants us to do.

Cap Com Roger. You didn't do any radar test over Africa, then?

Conrad Nope.

Cap Com Roger. Would you start a - quantity reading to SE O₂?
Flight, did you copy that?

Flight Repeat that, please, Carnarvan.

Conrad Carnarvan, we've got one other thing. The OAMS temperature has been running really cold up here and we noticed this morning that the system was sort of sluggish all over, and so we turned the heater back on at this time, about five minutes ago.

Car Cap Com Roger.

Flight We're going to take a look at it.

Car Cap Com Roger, flight.

Flight Tell him to go . .

Conrad We got a quantity read SC H₂.

Flight We'll take a look at this.

Car Cap Com Be advised Flight copied the problem and they're taking a look at it now. They'll let you know.

Conrad Ok.

Flight Carnarvan, this is Houston Flight.

Car Cap Com Go ahead.

Flight He should have the platform off now.

Car Cap Com Ok. He said he had it up. I'll advise him to turn it off.

Car Cap Com Ok Flight. Stand by.

Car Cap Com Go ahead, Flight.

Flight Tell him we'll take a look at this thing for awhile since he's got the heater on it and see what happens. And keep an eye on what his thruster does when the heater comes up.

Car Cap Com Roger. Flight advises they'll keep an eye on this thruster problem with the OAMS heater on and then see what happens and advise you later.

Conrad Ok. Well, we don't intend to do any more experiments unless they want us to, because we're down to about 12 percent fuel.

Car Cap Com Roger. I stand. Flight, you want to hold off on the experiments?

Flight Roger, we'll get him over Carnarvan this pass.

Car Cap Com Roger.

Flight - Uh, Canton.

Car Cap Com Roger. You all hold up on the experiments; they'll get to you over Canton.

Conrad Ok.

Flight Carnarvan, this is Houston.

Car Cap Com Go ahead.

Flight Did the thruster stick off or on?

Car Cap Com Stand by, I'll check. I had a continuous on indication on it, on the ground.

Flight Roger.

Car Cap Com Gemini, Carnarvan here. Did the thruster stick on or off?

Conrad It stuck off. It would not fire and we've isolated it to the number 7 thruster and it will not operate.

Car Cap Com Roger.

Flight Have they tried the backup electronics?

Car Cap Com Did your indication of the number 7 thruster go off now?

It's on now. It was on the first part of the pass, it went off it came back on about the time you started talking.

Conrad Ok. You say it's back on now?

Car Cap Com It's on now.

Conrad Well, I've got the circuit breaker open now.

Car Cap Com Ok.

Flight Tell him to turn the circuit breaker back on and see if it gets the signal there.

Car Cap Com Turn your circuit breaker back on. Ok. I lost indication.

Conrad It may be that one of the solenoids froze up open.

Car Cap Com Roger.

Flight Ask him if he's tried the backup electronics.

Car Cap Com Have you tried the backup electronics?

Conrad We'll bring you up to date - we tried secondary ACME bus power, and secondary attitude drivers, and secondary ACME logic.

Car Cap Com Roger.

Conrad With no success.

Car Cap Com Understand.

Flight Good deduction that the valve is stuck

Car Cap Com Say again, Flight.

Flight The valve must be stuck.

Car Cap Com Flight agrees the valve must be stuck. Give your quantity read at this time.

Car Cap Com I'm getting OAMS left on again.

Flight Cut the circuit breaker off.

Conrad I just opened up the number 8 circuit breaker. And it checked number 7 again. When you said it went out.

Flight Has he got the platform off?

Car Cap Com Is your platform still on?

Conrad That's affirmative.

Flight Cut it off.

Car Cap Com Ok. Request you power down your platform.

Conrad Ok.

Cooper Ok. We're all powered down, IMU is off, the paltform is
off and the IMU is off.

Car Cap Com Roger. Hey, Flight, the aux feed temp is 45 degrees, aux
fuel tamp is 40 and the CCA number 10 is reading 40.

Flight Roger, we copy.

Car Cap Com You want an LOS summary?

Flight Rog.

END OF TAPE

Good morning. Gemini Control here, 119 hours 2 minutes into the mission. The spacecraft is coming up on the West Coast of the United States and during part of this pass we will be looking at a sticky yaw left thruster, an 18 pound thruster. From all indications, either electronically or mechanically is stuck, did stick in an open position. However, we've been able to go around that sticky point and it is not leaking. I emphasize, it is not leaking either fuel or oxidizer. The crew can see it. Across the States, the crew is to receive a go--no-go on 92-1 area, the 92nd revolution, primary landing area. They are to give us a delayed tape playback, they will also receive an update on their 77-1 area and out in the area of the Canary Islands, they are to perform another D-6 photographic picture exercise. This is Gemini Control out at 119 hours 3 minutes into the mission.

END OF TAPE

This is Gemini Control Houston here, 119 hours 15 minutes 37 seconds. At precisely 119 hours and 6 minutes, Chris Kraft looked up at our big ground elapsed time clock and a grin spread from his right ear to his left ear, and he simply said, "ZAP." About a minute later, Capsule Communicator, Jim McDivitt, announced in a loud and clear voice that Gemini V was now one minute into the world record for space flight. On the early portion of this across the United States, we've been running through a series of checks with the Pilots, exercising certain electronic circuits and mechanical circuits looking at that yaw left thruster. We've gotten the data. Let's go into the conversation live.

Houston Cap Com Say again.

Cooper What is it?

Houston Cap Com 92-1 is the orbit you have a go for.

Conrad Yeah, I'm just kidding you.

Houston Cap Com Oh, okay. You were cutting out and I couldn't read you very well.

Conrad Oh, okay.

Houston Cap Com The Flight Director would like to speak to you for a moment.

Conrad Roger.

Houston Flight Good morning Gordo.

Cooper Chris, how are you?

Houston Flight How does it feel for the United States to be a new record holder?

Cooper At last, huh?

Houston Flight Roger. Congratulations.

Cooper We thought maybe you had slept too well last night in other words, you had rested better than we had, so we are going to put you to work this morning.

Houston Flight It seems that John Hodge does that to me every morning.

Conrad Houston, Gemini V.

Houston Cap Com Go ahead.

Conrad Do you want the readouts on our part for the 92-1 go?

Houston Cap Com Roger.

Houston Flight Roger.

Conrad Okay, 1A was 9.1, 1B, 8.6, 1C, 10.0, 2A was 6.9, 2B, 7.0, 2C, 8.2, RCS A 295, temperature 65, RCS B 290, temperature 68, left secondary O₂ 5400, right secondary O₂ 5300, and those readings were taken back when we were powered up.

Houston Cap Com Roger, and would you say what 1B was again, Please?

Conrad Roger, 1B was 8.6.

Houston Cap Com Roger.

Houston Cap Com And I'd like to add my congratulations also.

Conrad Thank you.

Houston Cap Com Have you gone to pitch on your roll jets?

Cooper No, we haven't.

Houston Cap Com You might as well go ahead and do that, and I'm not

we are going to have any great solution on how to get this thing working again.

Cooper Okay.

Cooper I'd like to add one thing in there, just for your information, when we first powered up this morning after having been drifting for quite a while, all the thrusters were exceedingly sluggish, and we saw great globs of liquid coming out of them drifting by us when we were firing them in pulse mode.

Houston Cap Com Roger, roger. That's interesting, isn't it?

Cooper And then I went to direct to see if we could clear them out and it did seem too, and we were getting great globules of liquid going by us, but they cleared out.

Houston Cap Com Okay. We were wondering about dropping fuel here and that might have been where we lost some of it.

Cooper It could be. Well, we had done that last tracking experiment, we were having great difficulty getting it on the radar test there. We had quite a bit of trouble holding our attitude and finally we had to go to direct to get the platform alined and then we were fiddling around trying to find which thruster was giving us the problem.

Houston Cap Com Roger.

Conrad Well another thing was, as we do get these tumbling rates pretty high out of the draining hydrogen, so

when we first started alining the platform, we apparently had intermittent operation on number 7 and we'd attribute it to the fact that we started drifting off to the fact that the hydrogen tank was venting, and then we finally got smart after a while and decided to look at some of it.

Houston Cap Com Roger.

Cooper Yeah, this venting has been giving us 2 to 3 degrees rates, here for the last half day or so.

Houston Cap Com Okay, have you noticed, has it built up since the last half day?

Cooper Yes, it seems to have built up just in the last half day or so.

Houston Cap Com Okay.

Conrad We drifted the first night, if you will remember, and the thing stayed pretty low, and last night is really the first night we drifted again. We had, of course, stayed in horizon scan most of the other United States night cycles and so last night was the first night we really drifted any length of time and it really did build up much higher than it did the first night.

Houston Cap Com Okay, well the venting should start going down now, so we hope that that problem goes away.

Cooper Roger.

Houston Cap Com Gemini V, we'd like to have you power down your computer
 at this time. We have a good load in it.

Cooper Roger, computer coming down.

Houston Cap Com Roger.

Houston Flight Gemini V, the friendly backups send congratulations and
 God speed for the rest of your mission.

Conrad Thank you.

Gemini Control here. The last voice you heard was that of Elliot See,
his reference to the "friendly backups" he and Neil Armstrong are the back-
up pilots for this mission. We are still out over the Bermuda area and they
have additional conversation, so let's stand by for it.

END OF TAPE

Houston Cap Com Gemini 5, Houston.

Cooper Go ahead.

Houston Cap Com We would like to have you turn your cryogenic gauging system off.

Cooper OK, turned to off.

Houston Cap Com Another thing, we've watched your source pressure on your OAMS propellant from Canarvon here to across the States; it's holding nice and steady, so we're not using any fuel there. Looks like most of the fuel that you used up was in that one pass; that could very well have been from the sticking thruster.

Cooper OK.

Houston Cap Com We're going to take a little look at the flight plan again, Gordo, and match up the fuel remaining with the experiments remaining.

Cooper OK.

Houston Cap Com Can you give us one more propellant quantity read out from your onboard gauging system?

Cooper Yes, we're reading about 12 percent remaining on the propellant quantity gauge.

Houston Cap Com OK. Very good.

Gemini Control here. We are definitely out of range now. The spacecraft is probably 1000 miles east of Bermuda, and we'll go off the line at this time.

END OF TAPE

This is Gemini Control here, 119 hours 34 minutes into the flight with the spacecraft just coming over the coast of West Africa. We have the conversation between the crew and the ground from the early portion of the State side pass and we will play it for you now.

Guaymas Cap Com Gemini V, Guaymas Cap Com. If you read, turn your
TM control switch to real-time at acquisition position.

Conrad We're reading you Guaymas.

Guaymas Cap Com All righty. Stand by for Houston.

Conrad Okay.

Guaymas Cap Com TM solid to Guaymas, go ahead Flight.

Houston Flight Gemini V, Houston.

Cooper Howdy Houston. Gemini V here.

Houston Flight Roger, have you got number 7 working yet?

Cooper Negative. We're powered down now and just sitting here
waiting for you to get on the line.

Houston Flight Okay, here's what we'd like to have you do. We'd like
to have you turn off circuit breaker number 7, and go
to Direct and give it a good squirt that way to see if
we can knock it loose with a good surge of power there.

Cooper All right. We've already tried that once, but we'll
try it again.

Houston Flight Okay. Yeah, I imagine you've tried everything, we
want to do a couple of little tests here to see what
we get.

Cooper Okay, that didn't succeed.

Houston Cap Com Okay, we'd like to try and find out whether we -- what the problem is, and we are going to do a little test here to see if maybe the problem is one of the solenoid valves has failed. What we want to do is to look at the common control bus voltage, I've got a procedure here I'll read it out step by step, but I want to brief you first. We'll look at the common control bus voltage and we'll pulse each, both the number 7 and number 8 jets one at a time and have you watch the common control bus voltage. Now if we've locked one of the solenoids on 7, the drop in common control bus voltage will be half what it will be when you pulse number 8. Both of the solenoids are working on 7, and they are both working on 8, we should get the same relative drop in voltage. So, are you ready to go through that -- this thing step by step now?

Cooper Roger, we have number 7 in the open now.

Houston Cap Com Okay, I'll read off the steps. First we want to go to the common control bus on the voltmeter.

Cooper Roger. We're on that.

Houston Okay, just a moment, we're going to actually do the manipulation over Texas, Gordo, but we can make our few steps here and we'll be ready to go when we get there. We'd like to have you turn squib batteries 1 and 2 off.

Cooper Okay, squib batteries 1 and 2 coming off.

Houston Cap Com Okay, we'd like to have you turn OAMS number 7 circuit breaker -- we'll like to have that closed.

Cooper You'd like to have the OAMS circuit breaker number 7 closed.

Houston Cap Com That's right.

Cooper Okay.

Houston Cap Com And we'd like to have number 8 circuit breaker open.

Cooper Okay.

Houston Cap Com And we'd like to have you in the direct control mode.

Cooper Roger.

Houston Cap Com Okay, Gordo. We'll stand by until we get solid TM over Texas and then we'll have you start manipulating and controlling.

Cooper Okay.

Conrad Houston, Gemini V.

Houston Cap Com Go ahead, Gemini V. Houston here.

Conrad I don't see any big problem. We can just go to pitch on the roll logic and that ought to take care of everything as far as getting the platform aligned and so forth.

Houston Cap Com Roger. We just wanted to see if we could -- if this was a heater problem or if we really lost part of the electronics or whether we had a valve stuck.

Conrad Okay.

Houston Cap Com We'll plan on skipping that D-6 over Texas this time, Gemini V.

Conrad Roger. Can you give us a readout on our OAMS fuel, is our gauge correct?

Houston Cap Com Roger Gemini V. Your gauge is correct.

Houston Cap Com Okay, Gemini V. We'd like to have observe the common control bus voltage very carefully and go ahead and move the attitude handle to yaw left.

Cooper Okay, yaw left now.

Houston Cap Com Okay. You just have to -- these can be short pulses here, about a second or so.

Cooper Roger.

Houston Cap Com Was that a four tenths drop?

Cooper About 1 volt, drop.

Houston Cap Com 1 volt, okay, very good.

Houston Cap Com Now we'd like to have you turn off the number 7 circuit breaker and close the number 8 circuit breaker.

Cooper Okay.

Houston Cap Com Now we'd like to have you yaw left again, and observe the drop.

Conrad It was only about half of what number 7 was. Suppose we got a short in there?

Houston Cap Com Oh, we'll think about that for a while. Okay, you can now turn your squib batteries 1 and 2 back on.

Conrad Did you get the same indications on the ground?

Houston Cap Com Stand by one. We're looking at the data now.

Guaymas Cap Com Flight, Guaymas got a 1 volt drop on both of them.

Houston Flight Roger Guaymas.

Houston Cap Com Gemini V, Houston. It looks like on the ground that they both dropped about the same amount.

Cooper Okay.

Houston Cap Com We'd like to have you return the circuit breakers to the condition where number 8 is closed and leave number 7 open and we'd like to have you go to attitude control. We'd also like to have you power up the computer at this time in prelaunch. We want to give you an update.

Cooper Okay. You want us to leave number 7 open, you say?

Houston Cap Com Yeah, why don't you leave 7 open for a while?

Cooper Okay.

Cooper Computer is in prelaunch, power's on.

Houston Cap Com Roger, we'll be sending you an update shortly.

Cooper Wait until we get it warmed up here.

Houston Cap Com Gemini V, you can turn your TM switch back to Command.

Cooper Roger.

END OF TAPE

Cooper Looks like good weather down there.

Houston Cap Com Gemini 5, you have a go to 92-1.

Cooper

Houston Cap Com These numbers are so high, I can't even count that high.

Gemini Control here. For your information, at 119 hours and 6 minutes, the spacecraft was at 20 degrees north and approximately 130 degrees west longitude, 20 degrees north, 130 degrees west longitude. As the spacecraft swung across the Atlantic, they had a brief conversation with the Canary Island station, and that conversation went like this:

Canary Cap Com Gemini 5, this is Canary Cap Com.

Cooper Go ahead, Canary, Gemini 5.

Canary Cap Com Roger. We would like to extend our congratulations to you. We have nothing else for you. We are standing by. Everything looks good from the ground.

Cooper OK. Everything's good here. Thank you very much.

Canary Cap Com Roger.

Gemini Control back here. The weather this morning - conditions are being very favorable for continuation of the Gemini 5 in the next two days, and probably through the remainder of the mission. The west Atlantic recovery area between Florida and Bermuda has unusually fine weather, as it has had through out the mission. Cloudiness is scattered most of the time, with a ceiling near 2000 feet now and then. Winds average a little less than 10 knots, and waves only 2 to 3 feet. Very little change is expected by tomorrow morning. In the east Atlantic

area about 300 miles west of the Canary Islands, cloudiness varies between 3 and 6 tenths coverage. Normal trade winds between 15 and 20 knots will raise seas of about 5 to 6 feet. The mid-Pacific area, about 500 miles north of Honolulu, has a little more than usual cloudiness and ceilings of about 1500 feet most of the time. Winds average around 15 knots, waves about 4 feet. A weak cold front has had little effect upon the west Pacific area, 500 miles south of Tokyo. Cloudiness will be scattered most of the time. Winds will average only about 10 knots, and waves 3 feet. A great part of the western north Pacific is unsettled and seems almost sure to evolve into one or more tropical storms in the next day or two. Tropical depression warnings have been distributed for two areas, one about 1500 miles east of the Philippines, and another in the South China Sea, near Viet Nam. Still other places are being watched for possible development. Tropical storm Doreen which was spotted by the Gemini 5 astronauts yesterday is centered about half way between San Diego and Hawaii, moving north northwest and weakening. Extensive squall weather in the Caribbean has not evolved into any organized disturbance. No significant changes have been observed south of the equator. This is Gemini Control.

END OF TAPE

Gemini Control, Houston here; 120 hours, 2 minutes into the flight. Through out the day we are going to take an extremely conservative approach to the use of fuel; for that reason, several experiments have been scrubbed. Most of the D-6 photographic experiments which require, can require, quite a lot of fuel for precise maneuvers will be eliminated. A sled run test scheduled for this morning at Holloman Air Force Base will not be undertaken. We will continue with several of the deep space, D-4, D-7 experiments, looking at distant stars, and some of the other photographic experiments which don't require precise control, but in general we're going to watch, in view of this sticky thruster, we're going to take a very conservative approach to the use of fuel. We have a brief conversation with the spacecraft and Houston via the Tananarive station. We'll play that for you now.

Houston Cap Com Gemini 5, Gemini 5, this is Houston. Over. Gemini 5, Houston. Do you read? Gemini 5, Gemini 5, Houston. Over.

Cooper Go ahead, Houston. Gemini 5 here..

Houston Cap Com Roger, Gordo. We would like to have you scrub a portion of D-4 D-7. We'd like to have you scrub the 410 Charlie, scrub 410 Charlie. OK? Houston here, transmitting in the blind. I would like to have you scrub 410 Charlie.

Cooper Roger, Houston, we got that, and we will scrub it.

Houston Cap Com Roger.

END OF TAPE

Gemini Control here, 120 hours 29 minutes into the mission. In the last pass across Carnarvon, the pilots were advised to scrub their D-6 picture taking exercise today. 3 in number. They were advised, however, to go ahead and attempt and IR reading on Kilauea, an active volcano in the Hawaiian area during a later pass. We have the Carnarvon tape ready and will play it for you now.

Carnarvon Cap Com Gemini V, Carnarvon.

Cooper Go ahead Carnarvon, Gemini V.

Carnarvon Cap Com Okay, we are going to update your TR for 92-1. Are you go?

Cooper Roger, we're go.

Carnarvon Cap Com Roger, we're go on the ground.

Cooper Roger.

Cooper Do you have a readout of these experiments they want us to do?

Carnarvon Cap Com Roger. Stand by one.

Carnarvon Cap Com Gemini V, Carnarvon. Okay, they want to scrub all the D-6 experiments. They want to scrub the D-4, D-7, 424B. But they do want to try to do the D-4, D-7 425A, but they don't want to spend a lot of fuel on it.

Cooper Okay, they want to do the D-4, D-7 425A?

Carnarvon Cap Com Right, that's at 14 34 51..

Cooper Okay, scrub D-6's, scrub the D-4, D-7 424B, but do D-4, D-7 425A, at 14 35 51.

MISSION COMMENTARY TRANSCRIPT

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Carnarvon Cap Com Roger, if it doesn't take -- don't spend a lot of fuel
on that 425A.

Carnarvon Cap Com Okay, and I'll attempt to do the SAD-13.

Cooper Okay.

Carnarvon Cap Com Flight, Carnarvon. Did I get that up right?

Houston Flight That's roger.

Carnarvon Cap Com Okay.

Houston Flight I think you read back 425A, but I'm sure he knows it's
424A, I beg your pardon, you read 424 and we wanted
425. It was read back correctly, so forget it.

Carnarvon Cap Com Transmitting your TR.

Cooper Okay, we're getting it.

Carnarvon Cap Com Roger, you're in sync.

Cooper Roger.

Carnarvon Cap Com Okay, be advised that there is a medical pass on the
Pilot at Hawaii. Hawaii's AOS is 14 31.

Cooper Roger. 14 31, medical pass on the Pilot.

Houston Flight Carnarvon, what amperage are you reading?

Carnarvon Cap Com Say again Flight.

Houston Flight What amperage are you reading on the ground?

Carnarvon Cap Com Okay, he came over the hill with the platform on, he
just powered down.

Houston Flight Would you cut another main for us.

Carnarvon Cap Com Roger.

Houston Flight We'd like to know why he had the platform on?

Carnarvon Cap Com Gemini 8, Carnarvon. Could you tell us why you had the
platform on?

Cooper Roger, at the last word we got, they had only scrubbed
on thing, and loaded the platform on those others,
over.

Carnarvon Cap Com Roger, I understand.

Cooper So, we have now powered the platform back down.

Carnarvon Cap Com Roger.

Carnarvon Cap Com Would you verify that the load jet switch is in a pitch
position.

Cooper Affirmative.

Houston Flight Ask him if he has any other questions on the Flight Plan.

Carnarvon Cap Com Gemini V, Carnarvon. Do you have any other questions
at this time on the Flight Plan?

Cooper Negative. I don't think so.

Carnarvon Cap Com Roger.

Cooper You might pass on to Flight also another small thing.
We had our onboard voice tape fade out sometime yesterday.

Carnarvon Cap Com Roger.

Cooper We have no onboard recording.

Carnarvon Cap Com Roger.

END OF TAPE

Gemini Control here; 120 hours, 41 minutes into the mission. In the pass over Hawaii, just completed, we've confirmed that both yaw left thrusters, both number 7 and number 8, are operative. These thrusters fire in a, this assumes a small-end-forward position, they fire in the direction to the left of the spacecraft. One thruster is located at approximately 8 o'clock, the other one at 10 o'clock. We have the Hawaii tape, and we are ready to play it for you now.

Hawaii Cap Com Gemini 5, this is Hawaii Cap Com.

Conrad Roger. Sending the blood pressure down.

Hawaii Surgeon Gemini 5, this is Hawaii Surgeon. Cuffs at full scale. That's was a real good blood pressure. Give me a mark when you start your exercise.

Conrad Mark.

Hawaii Cap Com Houston flight, Hawaii Cap Com.

Houston Cap Com Go ahead.

Hawaii Cap Com We're showing a D-4 D-7 carrier with modulation.

Houston Cap Com Yeah, that's right.

Hawaii Cap Com Roger.

Houston Cap Com That's the 425 Alpha, Hawaii.

Conrad Cuffs at full scale.

Hawaii Cap Com Roger, flight.

Hawaii Surgeon Now we have a good blood pressure; standing by for your food, water, and sleep report. Particularly we are interested in a summary of the last 24 hours, if we can have one.

Conrad Roger. Wait one.

Hawaii Surgeon Right.

Conrad Water is 20,000 lbs. I already gave the last meal I ate which was 3B at 05090000; had about 6 hours sleep over the last 24.

Hawaii Surgeon Roger. Six hours sleep. On the meals that you've eaten, we have estimated from your past reports that it's 1D, 1C, and 3B. Is this correct for the last 24 hours?

Conrad That sounds about right.

Hawaii Surgeon All right.

Cooper How about putting the cap back on, please?

Hawaii SurgeonHawaii Surgeon out.

Cooper OK.

Hawaii Cap Com Gemini 5, Hawaii Cap Com. We hold you green on the ground.

Cooper Roger. We're green here except for our control system, and we do not have a yaw left thrust. Over.

Hawaii Cap Com Hawaii, understand, yaw left thruster.

Cooper That's right we've tried it in pulse and in direct, and we can see it fire, a very faint fire from our indirect out there, but we're getting no thrust out of it. Right, that's number 8 thruster. Number 7, we have the circuit breaker open on it.

Hawaii Cap Com Roger, I understand.

Cooper And we are in, the roll jets are in the pitch position.

Hawaii Cap Com Roger. Did you copy, flight?

Houston Cap Com Did he say the number 8 had also failed?

Hawaii Cap Com He didn't say it failed; what he said was he could see it thrusting, but he didn't feel it get thrust out of it.

Houston Cap Com Ask him if both no. 7 and no. 8 are now failed.

Hawaii Cap Com Roger. Gemini, has both no. 7 and no. 8 failed now?

Cooper That is correct.

Hawaii Cap Com Roger. Did you copy, flight?

Houston Cap Com Roger.

Hawaii Cap Com Gemini 5, Hawaii standing by.

Cooper OK. Mighty fine, thank you.

END OF TAPE

This is Gemini Control, 121 hours 2 minutes into the flight on the 77th rev, about central Atlantic. During the last pass, and here is a switch for you on the weather. We hoped to perform an S-4 or cloud top experiment, and this requires a sustained strip of clouds, but wouldn't you know the weather did not cooperate. The -- most of the United States was reported clear and sunny and open, so we couldn't perform the weather photography experiment. In the eastern portion of the swing, Pete Conrad reported that he could see a carrier and a destroyer entering Jacksonville Harbour. That would have been Mayport. We have the tape of the United States pass and we are ready to play it for you now.

Guaymas Cap Com Gemini V, Guaymas Cap Com. Over.

Cooper Go ahead Guaymas, this is Gemini V.

Guaymas Cap Com Okay, have you tried the other attitude thrusters?

Cooper Yeah, we have pitch up and down, and roll right and left.

Guaymas Cap Com Are they working normally?

Cooper Roger.

Guaymas Cap Com All righty.

Guaymas Cap Com Flight, Guaymas. Did you copy?

Houston Flight Roger.

Guaymas Cap Com Did you try a complete secondary electronics on the thrust to number 8?

Cooper No, we haven't.

Guaymas Cap Com You want to try that Flight

Houston Flight Negative.

Guaymas Cap Com Okay, Flight says leave it alone this time.

Cooper Okay.

Guaymas Cap Com Okay, you're looking good here on the ground, Gemini.

Cooper Okay, very good.

Houston Cap Com Gemini V, this is Houston.

Cooper Go ahead Houston, Gemini V.

Houston Cap Com We'd like to have you purge sections 1 and 2. You can start at any time you'd like now.

Cooper Okay, we'll start purging them in just a minute.

Houston Cap Com I was going to give you some more flight plan stuff. We were going to scrub the 6-7 because of the weather, but I guess you don't have to worry about that, do we?

Cooper No, they ought to be somewhere around us.

Houston Cap Com Yeah, say, you want to check your tone box circuit breaker. That powers the tape recorder. I wonder if it had popped off on you?

Cooper I checked that already.

Houston Cap Com Okay.

Cooper Coming up over the Dallas and Fort Worth area. We can see it very clearly.

Houston Cap Com Roger.

Cooper What do the people down there think. Did we get a little cold on that OAMS stuff?

Houston Cap Com I don't know. They are still working on it, Gordo.

Cooper Just kidding, I figured they were.

Houston Cap Com Gordo, we think that the mixture ratio was off for some reason. We don't know exactly why yet.

Conrad Yeah, we could see this thruster is actually burning, but we're not getting any thrust out of it. We can see it just, as a matter of fact, it puts out a brighter flame than the normal thruster firing.

Houston Cap Com Yeah, that's a pretty good indication that we've got a bad mixture ratio. Did you see anything like that on the other one, or did it just fail?

Conrad No, it's just not flat burning.

Cooper We didn't see anything at all out of the other one.

Houston Cap Com Okay. Yeah, we're working on it, down here and I guess -- why don't we just hold the experiments until we get something figured out here.

Cooper Okay.

Conrad The only thing that I can think of, Jim, is last night I guess when we were just drifting in this hydrogen setting that it was -- let's see if I remember it right, the left roll and the right yaw.

Cooper Left yaw and right roll.

Conrad Left yaw and right roll, and we spent a lot of time corkscrewing around like that and then it seemed to

keep that side out of the sun anytime we were in it and it was fairly good. It didn't have to be the way we were dressing.

Houston Cap Com Okay, you were getting left yaw and right roll, and you say that that side of the spacecraft was in the darkness quite a bit.

Conrad Yeah.

Houston Cap Com Okay. That sounds like a nifty maneuver.

Conrad That's what the hydrogen purge and I guess maybe something -- hydrogen venting.

Cooper The hydrogen was venting

Houston Cap Com I knew you guys weren't very coordinated, but left yaw and right roll, I don't know?

Cooper That's my fuel cells Jim.

Houston Cap Com Roger.

Conrad Okay, we're starting the hydrogen purge on number 1 right now.

Houston Cap Com Okay.

Conrad Number 2 hydrogen going.

Houston Cap Com Roger.

Conrad Number 1 hydrogen going.

Houston Surgeon Gemini V, this is the MCC Surgeon. How did your sleep go last night?

Cooper Oh, we got about 3 hours each, $3\frac{1}{2}$ hours each I guess.

Houston Surgeon Yeah, I heard the time. Was it easier with the Flight Plan worked out better last night?

Cooper A little bit better.

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Cooper Yeah, we got them off.

Cooper A lot better I think.

Cooper Yeah.

Houston Cap Com Very good.

Houston Cap Com Yeah, that was our trouble with the S-7. We didn't have any thunderstorms to take pictures of.

Houston Cap Com Roger.

Houston Cap Com You're a real Homing Pigeon for these aircraft carriers,
aren't you.

Houston Cap Com Okay. How was the weather cut around Laredo. Do you think you have any chance of seeing that SAD-13 target?

Houston Cap Com Okay. Do you think you can control the spacecraft, Gordo,
so that you could do the SAI-13?

Cooper Yeah, we want to do it.

Houston Cap Com Say again?

Cooper We want to do the SAD-13.

Houston Cap Com You do want to do it, roger. We'd like to have you do
it too.

Cooper You said can we control the spacecraft today, huh?

Houston Cap Com Yes, can you control it?

Cooper I don't know, we might be able to.

Houston Cap Com Okay, don't expend a lot of fuel doing it. We're
trying to save some fuel here too.

Cooper Okay.

END OF TAPE

Gemini Control, Houston; 121 hours, 48 minutes. With the spacecraft over Australia, we've had a long chat with the Gemini 5 spacecraft. We've advised them on the precise powered-down configuration requested; they've also been advised to suspend the use of onboard fuel until further notice. More than likely, we will stay in this powered-down and drifting flight state for the better part of today. The powered-down configuration is drawing an amp load of 18 amps at 27 volts. We have the tape ready now from the Canarvon pass, and we will play it for you now.

Canarvon Cap Com Gemini 5, Canarvon.

Conrad Go ahead, Canarvon, this is Gemini 5.

Canarvon Cap Com Roger. I have a flight plan up-date for you when you are ready to copy.

Conrad Stand by.

Canarvon Cap Com Also be advised that flight requests that you use no fuel until advised, delete all experiments until advised.

Conrad Ready to copy the flight plan.

Canarvon Cap Com Roger. Item, map 155549, longitude 151.4 east, rev 77. Next item, star 155549, remarks, zero hours, 1 niner minutes. Do you copy?

Conrad Roger.

Canarvon Cap Com Did you copy that about the fuel?

Conrad Roger.

Canarvon Cap Com OK, and they want you in a powered-down configuratio:

and this is a list of the items they wish you to have powered up--a voice control center, one suit fan, two coolant pumps, ac-aid beacon, UHF receiver, a DCS receiver, PCM tape recorder, a bio-med recorder number 2, the DC and DC converter, the OAMS heater, and the RCS heater, the water line heater, and unnecessary cabin lights. Do you copy?

Conrad No, I got all of it but one--voice control, one suit fan, 2 coolant pumps, 1 ac-aid, and what was the next one?

Canarvon Cap Com The next one was UHF receiver, followed by DCS receiver.

Conrad Yeah, a DCS, PCM tape, bio-med recorder no. 2, DC-DC converter, RCS mode, and ..., mode heaters.

Canarvon Cap Com Roger. They are trying to work up some test on this attitude pressure problem, but they haven't got anything as yet.

Conrad OK.

Canarvon Cap Com They have several thoughts, thruster 7 and 8 run on the end of the manifold. There is the possibility of clogging toward the end of the manifold. Or it could be low on fuel or oxidizer, or both. They are working on the problem.

Conrad Roger.

Houston Cap Com We'd also like the scanner heaters left on,

Conrad OK.

Canarvon Cap Com You can turn your primary ACME power off.

Conrad Roger.

Canarvon Cap Com OK. We've cut your telemetry off; we had a look at
it, it looks OK; we've transmitted off.

Conrad OK.

Canarvon Cap Com Now we are standing by.

Conrad Roger.

Gemini Control here. In addition to the items read off that flight
directors requested remain powered up, one other item, the MSC-1
experiment, the electrostatic charge sensor, will be left on. This
draws a very small amount of power, and the crew will be advised of
that when we reach Hawaii some 5 minutes from now. This is Gemini
Control.

END OF TAPE